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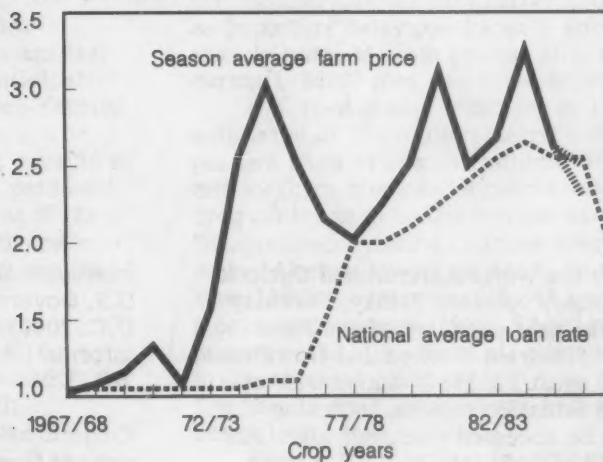
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Feed

Outlook and Situation Report

Corn Price to Fall Below Loan Rate in 1985/86

Dollars per bushel



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SUMMARY

Enactment of the Food Security Act of 1985 (farm bill), and recently announced programs authorized by it are the most important factors currently shaping the outlook for grain farmers.

On January 13, the 1986 loan rate for corn was set at \$1.92 a bushel, the lowest level possible under the new law. Loan rates for wheat and other feed grains were reduced similarly. Farm prices should fall along with the loan rate reductions. Target prices are frozen by law at their 1985 levels (\$3.03 for corn). Thus, potential deficiency payments are up sharply since last year, particularly since large portions are not subject to the \$50,000 payment limitation.

The required acreage reduction for feed grain program participants is 17.5 percent, plus a paid (in-kind) land diversion of 2.5 percent. An "underplanting" provision gives producers deficiency payment protection on 92 percent of their permitted plantings if they plant at least 50 percent of their permitted acreage to the program crop. The 1986 programs initially required cross-compliance for wheat and feed grains, but technical amendments to the legislation are under consideration that could modify this provision and others. Signup for the 1986 programs was delayed. Signup is now set for March 6 to April 11.

The deficiency payment for corn is estimated at \$1.03 a bushel. Producers may request 40 percent of their total anticipated deficiency payment at signup. Three-fourths of the advanced deficiency payments are payable in cash; the other fourth is payable in kind. The rate for the 2.5-percent paid land diversion for corn producers is set at \$0.73 a bushel. Advanced deficiency and diversion PIK payments will be available between May 1 and September 30, 1986.

All PIK entitlements for advance deficiency or diversion payments will be provided in the form of a dollar-valued generic certificate. Producers with commodities under regular, special, or farmer-owned reserve loan with CCC at signup must redeem the loans to satisfy their PIKs. The volume of commodities that may be redeemed for PIK will depend on the per-unit value as announced by the CCC on the day redemption is made. Flexibility in the use of generic certificates is causing great

uncertainty about the level of corn redemptions this summer. Private analysts have estimated that less than 300 to more than 450 million bushels of PIK corn will be made available.

Cash payments to producers for commodity loans, deficiency payments and diversion payments for 1986 crops will be reduced by 4.3 percent under the Gramm-Rudman-Hollings Act. This effectively will reduce price and income support levels, although in-kind payments and acreage conservation reserve payments will not be affected.

The farm bill's various export promotion mechanisms will help U.S. corn and sorghum sales. The biggest single stimulus will come from the reduced loan rates for coarse grains. High loan rates, along with other factors such as the high-valued dollar, caused U.S. corn sales to fall 17 percent from 1981/82 to just over 41 million tons in 1985/86. Meantime, world exports fell only 8 percent, as other exporters appeared willing to expand sales at almost any cost.

The near term impact on export activity is likely marginal. Over 50 percent of expected 1985/86 exports has already been shipped or sold. During the next few months, sales activity should be brisk, but sales during the summer quarter may suffer considerably as importers delay purchases in anticipation of sharply reduced grain prices. U.S. exports during 1986/87 may rise substantially.

U.S. feed grain production in 1985 was estimated at 274 million metric tons, up 16 percent from 1984's 237 million. Record corn and sorghum crops and a near-record barley crop contributed to the bumper harvest. Disappearance during October-December dropped below a year earlier to 74.9 million tons, leaving a near-record 242.3 million in stocks on January 1, 1986. The slowdown was accompanied by massive placements of grain in Government price-support loan programs. The loans have supported prices, but at levels below loan rates.

Feed grain plantings in 1985 totaled 128 million acres, of which 111.5 were harvested for grain, 4 percent above 1984. Corn accounted for 82 percent of feed grain production in 1984 and 1985. Record yields per acre for corn (118 bushels), sorghum (66.7 bushels) and oats (63.6 bushels) contributed to

a record composite feed grain yield of 2.46 million tons per acre, 11 percent above 1984.

Disappearance for October–December 1985 was below a year earlier because of declines in exports and feed and residual disappearance. Exports were 14.6 million tons, down from 18.2 million in fall 1984. Barley exports declined 22 percent, and corn exports showed the largest tonnage drop—2.3 million tons.

Feed and residual disappearance last fall declined roughly in line with expectations based on the decline in grain-consuming animal units. Much of the decrease was in cattle on feed, largely offset by increases in broiler and turkey production. Hay and forage shortages and harsh winter weather in the Northern Plains and Mountain States have created extraordinary feed requirements there.

Food, seed, and industrial use of feed grains was up 6 percent during October–December 1985, reflecting strong growth in ethanol production and especially

strong high-fructose corn syrup production through December.

Placements of 1985–crop corn under regular 9-month CCC loans have already exceeded 2.7 billion bushels and will likely be around 3 billion. This is likely to cause free stocks to tighten before the marketing year ends, leaving the possibility open for a price rally in late spring. However, the tight free stocks situation will be somewhat alleviated by the advance in-kind payments. Bad weather or other crop-reducing events would also strengthen prices into the 1986/87 marketing year.

Although the farm price of corn was well below loan in the fall quarter, any outstanding loan or forfeited corn will be counted in the season's average at the loan rate of \$2.55. Thus, the 1985/86 season average corn price is likely to fall between \$2.30 and \$2.50 per bushel, marking the first year since 1967 that the season average price did not exceed the loan rate.

FEED GRAIN SUPPLY AND USE

The last estimate of the season put 1985 feed grain production at 274 million metric tons, up 16 percent from 1984's 237 million. Record corn and sorghum crops and a near-record barley crop contributed to the bumper harvest. However, disappearance lagged behind 1984 for the October–December quarter at 74.9 million tons, leaving a near-record 242.3 million in stocks on January 1, 1986. The slowdown in use was accompanied by massive placements of grain in Government price-support loan programs, which supported prices, although at levels below loan rates.

Last year's feed grain plantings covered 128 million acres, of which 111.5 were harvested for grain, 4 percent above 1984. Corn accounted for 82 percent of feed grain production in 1985 and 1984. Record yields per acre harvested for corn (118 bushels), sorghum (66.7 bushels), and oats (63.6 bushels) contributed to a record composite feed grain yield of 2.46 million tons per acre, 11 percent above 1984.

Disappearance for October–December 1985 was below a year earlier because of

declines in exports and feed and residual disappearance. Exports were 14.6 million tons, compared with 18.2 million in the fall of 1984. Of the four feed grains, barley exports showed the biggest relative drop at 22 percent of a year earlier. Corn exports had the largest tonnage drop, 2.3 million, from the fall quarter of 1984.

Feed and residual disappearance was 52.8 million tons in October–December 1985, 1.1 million below the same period in 1984. This drop was roughly in line with expectations based on the decline in livestock and poultry numbers weighted by feed requirements, or grain consuming animal units (GCAU's). This year, there are an estimated 77.8 million GCAU's on hand, compared with 78.9 million in 1984/85. Much of the decline is in cattle on feed, largely offset by increases in broiler and turkey production. Also, although hog inventories are low, production capacity remains near previous years because of a greater rate of pigs saved per litter and heavier slaughter weights through 1985, which are likely to continue in 1986. Hay and forage shortages, along with harsh winter weather in

the Northern Plains and Mountain States, have created extraordinary feed requirements there.

In contrast to exports, feed, and residual disappearance, FSI use of feed grains was up 6 percent during October-December 1985, reflecting strong growth in ethanol production and especially strong high fructose corn syrup production through December.

Farm Bill

By far the most important recent development in the outlook for grain farmers has been the enactment of the Food Security Act of 1985, and related program announcements. With a farm bill in place, the Secretary of Agriculture made several key announcements concerning feed grains. On January 13, the 1986 loan rate for corn was set at \$1.92 per bushel, the lowest level possible under the new law. Loan rates for wheat and other feed grains were reduced similarly: \$1.56 for barley; \$0.99 for oats, \$1.82 for sorghum; \$1.63 for rye; and \$2.40 for wheat. Target prices are frozen by law at their 1985 levels: \$3.03 for corn; \$2.60 for barley; \$1.60 for oats, \$2.88 for sorghum; and \$4.38 for wheat. Thus, potential deficiency payments are greatly increased—particularly since large portions are not subject to the \$50,000 payment limitation.

Signup for program participation was delayed. Signup is now set to take place from March 6 through April 11. For 1986, feed grain program participants must comply with a required acreage reduction of 17.5 percent, plus a paid (in-kind) land diversion of 2.5 percent. An "underplanting" provision gives producers deficiency payment protection on 92 percent of their permitted plantings if they plant at least 50 percent of their permitted acreage to the program crop and the remaining permitted acreage to a conservation use, or a nonprogram crop other than soybeans or extra-long staple cotton.

Cross-compliance—a restriction on the farm's total plantings of program crops to no more than base—was initially required for wheat and feed grains. However, cross-compliance is not expected to be required under the 1986 feed grain program. Technical amendments to the farm bill are

under consideration that could modify this provision as well as others.

On January 29, provisions of the Acreage Conservation Reserve were announced. This program allows a farmer to contract with the USDA to take highly erodible land out of farming for 10 years, and establish permanent vegetative cover in return for annual rental payments. Farmers could submit bids from March 3 through March 14 at ASCS offices for proposed acreage and annual rental payments. In addition, the USDA will pay 50 percent of conservation cover crop costs.

Also on January 29, provisions for advanced deficiency and diversion PIK payments were announced. Total deficiency payment rates were estimated at \$1.03 for corn, \$.95 for barley, \$.45 for oats, and \$.98 for sorghum. Producers may request 40 percent of their total anticipated deficiency payment at signup. Three-fourths of the advanced deficiency payments are payable in cash, the other fourth is payable in kind.

The per-bushel payment rates for the 2.5-percent paid land diversion for wheat and feed grain producers were set at \$.73 for corn, \$1.10 for wheat, \$.57 for barley, \$.36 for oats, and \$.65 for sorghum.

All PIK entitlements for advance deficiency or diversion payments will be provided in the form of dollar valued generic certificates. Producers with any commodities (except peanuts or tobacco) under regular, special, or FOR loans with CCC at signup must redeem that loan collateral to satisfy their PIK. These generic certificates will be dollar-denominated, negotiable, and payable to the bearer in kind. The quantity of commodities that may be redeemed for PIK will depend on the per-unit value announced by the CCC on the day redemption is made.

Producers with insufficient loan collateral to satisfy their PIK entitlements may sell certificates to commercial dealers who may redeem them from the CCC; to another producer who may use the certificate to redeem an outstanding commodity loan; or to co-ops who may market them.

Producers have from May 1 through September 30, 1986, to redeem their PIK obligation. Commercial entities must redeem

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certificates before December 31, 1986. Flexibility in the use of generic certificates is causing great uncertainty about the level of corn PIK redemptions this summer. Private analysts have estimated less than 300 to more than 450 million bushels of total PIK corn will be made available this summer. The total quantity of corn redeemed depends on the price of corn as well as certificate-holders' expectations about future price movements for the various redeemable commodities.

The start of the marketing year for corn was shifted from October 1 to September 1. This change should help eliminate unusual feed and residual disappearance patterns in the summer and fall caused by September use of the new crop.

Gramm-Rudman-Hollings Act

By Presidential order issued under the Gramm-Rudman-Hollings Act, the USDA will reduce outlays by 4.3 percent beginning March 1, 1986. Checks paid to producers for commodity loans, deficiency and diversion payments for 1986 crops, as well as payments for PIK certificates that are redeemed for cash, will be reduced by 4.3 percent. Both advance and final cash payments for 1986 crops are subject to the reduction regardless of the fiscal year in which they are actually paid.

Although price-support loan and target price levels are not considered changed, the reduction in payments effectively reduces these support levels. To the farmer, the \$1.92 loan rate for corn will translate into \$1.84 per bushel. The effective target price support is more complicated, since reductions depend on the size of calculated deficiency payment rates, determined in part by realized corn prices.

The 4.3-percent reduction applies to all cash commodity program payments. However, in-kind payments or certificates are not subject to reduction. Food stamps and other nutrition programs of the Agriculture Department are exempted as well.

Corn

Corn production in 1985 was a record 8,865 million bushels, up 16 percent from

1984. Yield per acre harvested was a record 118 bushels, 11.3 more than 1984 and 4.8 more than the 1982 record. Because of recent upward revisions in yield and production, total supply for the 1985/86 marketing year is now 10,248 million bushels, just 162 million below the 1982/83 record.

Disappearance in October-December was lower than anticipated at 2,370 million bushels. Exports were only 515 million bushels, 85 percent of a year earlier and feed and residual disappearance was 1,600 million, down to 95 percent of a year earlier. In contrast, FSI use was 8.5 percent higher at 255 million bushels. Wheat and early 1986-crop feed grain feeding is expected to cut into feeding of old-crop corn next summer because the 1986 crops will be covered by much lower loan rates. Because of the lower loan rates and less feeding in the fall than anticipated, the projected feed and residual use for the 1985/86 marketing year was reduced by 200 million bushels to 4,100 million.

On January 1, 1986, corn stocks totaled 7,877 million bushels. FOR and special loans accounted for 639 million bushels, while CCC-owned stocks were 436 million. Outstanding regular loans covered 2,171 million bushels, of which 165 million were dwindling 1984-crop loans, and 2,006 million were burgeoning 1985-crop loans.

Current projections place corn disappearance for January-September 1986 at 4,475 million bushels. Considering January 1 free stocks of 4,631 million bushels, and likely 1985-crop loan placements of about 3 billion, projected disappearance will be difficult to meet. The free supply would then be required to be augmented by at least 840 million bushels of combined loan redemptions, PIK redemptions, and FOR rollovers in the January-September 1986 period.

This projected rate of disappearance would leave an October 1 carryout of 3,403 million bushels, about 2.5 times the year-earlier level, and 9 percent above the 1983 record. The October 1 FOR stocks are projected to climb to 625 million bushels and CCC-owned inventories to 510 million. This would leave 2,268 million bushels outside these tightly held categories. In addition, any corn covered by outstanding regular and special

producer storage loans is expected to account for another 2,155 million bushels, leaving only 113 million outside all Government and program stock commitments.

Since the start of the 1985/86 marketing year, farm price has averaged about 14 percent below year-earlier levels. The October 1985 price at \$2.12 was the lowest farm price since October 1982, which was \$1.95. Prices strengthened through January and are likely to continue improving into late spring. Futures prices for March and May delivery have fallen about a dime since the announcement of 1986 loan rates and advanced PIK in anticipation of lower price support programs. Thus, spot market prices have stagnated in February. If prices do not strengthen by roughly 20 cents, redemptions may not be compatible with current use projections.

The simple average of monthly farm prices from October 1985 through January 1986 was \$2.24 per bushel. Any outstanding loan or forfeited corn will be counted in the season's average at the loan rate of \$2.55. Thus, the 1985/86 season average corn price is likely to fall between \$2.30 and \$2.50 per bushel. This would be the first year since 1967 that the season average price did not exceed the loan rate (\$2.55 for 1985-crop corn).

Placements of 1985-crop corn under regular 9-month CCC loan have already exceeded 2.7 billion bushels and may be around 3 billion. This will cause free stocks to tighten before the marketing year ends, leaving the possibility open for a price rally, probably in late spring before solid information on new-crop prospects becomes available. Bad weather or other crop-reducing events would hold prices firm into the 1986/87 marketing year.

Sorghum

Even with a downward revision in yield from earlier estimates, 1985 grain sorghum production was estimated to be a record 1.11 billion bushels. Total estimated 1985/86 supply is a record 1.38 billion bushels.

Stocks on January 1, 1986, totaled 990 million bushels, implying a total disappearance for October-December of 394 million and a

feed and residual of 335 million. The rate of feed and residual disappearance was 11 percent above a year earlier, leading to a 25-million-bushel upward revision in that category for the 1985/86 marketing year.

It may be that part of the fall disappearance was inadvertently shifted out of the summer period, when feed and residual disappearance was negative. By October 1, 1985, 29 percent of the sorghum crop had been harvested, but showed on the balance sheet in the October-December quarter. Moving the new marketing year to September 1—a month earlier than in the past—should help eliminate some of this inappropriate shifting of disappearance from summer to fall periods.

Sorghum loan activity has been fairly heavy, with roughly 30 percent of the 1985 crop already placed under loan. However, the free supply of sorghum grain is not likely to tighten as much as corn's because the harvest starts earlier. Sorghum feeding is likely to be heavy next summer as the new-crop harvest brings grain on the market under new reduced loan rates (\$1.82 for 1986, compared with \$2.42 for the 1985 crop). New-crop sorghum, along with new-crop wheat and other early feed grains, is likely to cut into feeding of old-crop grains, especially those with a tight free supply. Season average price is projected to range from \$2.10 to \$2.30 per bushel for 1985/86.

For 1986 plantings, a cross-compliance requirement for program participants would have a depressing effect. In much of the Southeast and Delta where sorghum area has increased in recent years, plantings greatly exceed base. Producers of other feed grains and wheat who normally also plant sorghum would be caught with a double penalty if they had to limit sorghum plantings to their base.

Barley

The generally bearish picture for barley price fundamentals has not changed much, although some details have. The 1985 crop estimate was reduced by 10 million bushels to 589 million, leaving 1984 the record year. However, exports have been lamentably weak at only 30 percent of the June-December movement of a year ago. The projection of exports for the 1985/86 marketing year is

down to 25 million bushels, compared with 77 million in 1984/85.

Loan activity for barley has greatly exceeded anything seen in previous years, but the supply is so much more than demand that free supplies will not likely tighten sufficiently to cause prices to rise this spring.

Farm prices were generally 15 to 20 percent below a year earlier until November. Since December, the barley farm price was 5 to 10 percent below a year earlier, averaging \$2.03 from June through January.

Stocks on January 1 were 534 million bushels, 22 percent greater than a year earlier. Carryout for the marketing year is expected to increase by 103 million bushels to 349 million.

Oats

Weak prices in 1985/86 appear to be helping clear the oat market. Imports, which have been important to the oat supply, were only 86 percent of a year earlier through December. While exports remain unimportant, feed and residual disappearance was up 6 percent from the same period.

The 519-million-bushel 1985 crop has placed upward pressure on supply. January 1, 1986, stocks were 379 million bushels, up 21 million from a year earlier. Yet, the increased pace of use, combined with slower imports, has led to a projected 13-million-bushel decline in carryout from last year. Since August, farm prices have been about 30 percent below year-earlier levels. In October, the farm price was the lowest since October 1978 at \$1.08 per bushel. For June through January, the average of monthly farm prices was \$1.22 per bushel. For the 1985 June-May marketing year, the range of the projected season average farm price is \$1.20 to \$1.40 per bushel.

Hay

January 1, 1986, hay stocks were 99 million short tons, 2 percent below January 1, 1985. However, the situation for hay and forage supplies has been one of contrasts.

Critical shortages have loomed in the Northern Plains and Mountain States, while supplies have been abundant in the Southern and Central Plains.

Emergency feed assistance is available to disaster areas, including parts of North Dakota, South Dakota, Montana, and Wyoming. Thus, while total supplies appear adequate and national average prices moderate, regional differences have been marked. For example, the January farm price for all hay averaged \$67.80 per ton nationally, although prices in Montana averaged \$85.00 while the Oklahoma price was only \$60.00. Since the start of the 1985/86 marketing year, national monthly hay prices have averaged 5 to 10 percent below a year earlier.

FOOD, SEED AND INDUSTRIAL USE OF CORN

Food, seed, and industrial (FSI) use of corn surpassed the 1-billion-bushel level in the 1984/85 crop year. A 65-million-bushel increase is projected in the 1985/86 crop year. This 6-percent increase would be the lowest rate of change since 1977/78. However, a number of factors could change this outlook before the completion of the crop year. Fast moving developments in the high fructose corn syrup (HFCS) and ethanol fuel markets, the largest users of corn for FSI purposes, could force the FSI estimate to be revised upward.

The role of corn sweeteners continues to grow. The decision in November 1984 by the major soft drink manufacturers to allow a 100-percent substitution of HFCS for sugar has been the catalyst for the surge in the corn sweetener market. HFCS use increased by over 50 percent in the past 3 years, specifically due to this strong demand from the soft drink industry. Demand for HFCS has always been strongest during the summer when soft drink use is at its peak and then tapers off during in the fall; however, last year demand remained strong through December. Although demand may not level off for the next year or two, it is approaching maximum levels by most major users and should begin to stabilize.

Corn: Food, seed, and industrial use 1/

Year beginning October 1	Wet-milled products				Dry-milled alcohol	Dry-milled and alkaline cooked products	Seed	Total
	HFCS	Glucose and dextrose	Starch	Alcohol				
Million bushels								
1979	140	175	130	30	20	160	20	675
1980	165	185	125	40	35	165	20	735
1981	190	185	135	85	35	163	19	812
1982	215	185	135	130	50	168	15	898
1983	255	190	145	150	50	164	19	973
1984	310	190	145	150	90	161	19	1,065
1985 2/	330	190	150	170	110	160	20	1,130

1/ Data in this table are estimates based on production and sales figures obtained from various Government and private industry publications as well as on unpublished information provided by numerous industry sources. 2/ Projected.

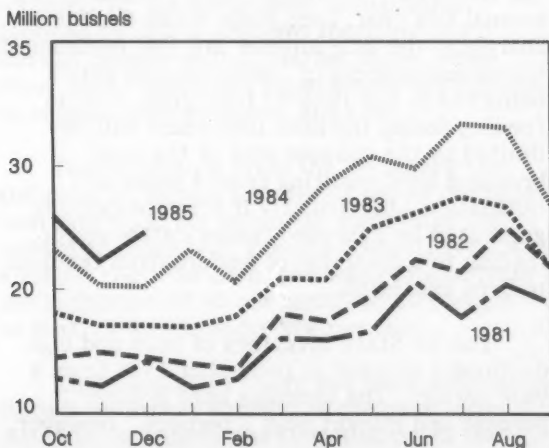
Demand for glucose, dextrose, and starch have changed little in the last 10 years. These markets are more mature in nature than the one for HFCS and increases have been limited to 1-2 percent each year. Growth should remain in the 1-2 percent area in the foreseeable future unless new market developments create additional demand for these products.

In 1985, the per capita use of corn sweeteners surpassed 64 pounds. This means that for the first time, use of corn sweeteners surpassed sugar on a per capita basis. Consumption of all sweeteners has only increased by about 10 percent over the past 8 years. Therefore, the gains made by corn

sweeteners have been offset by equally large reductions in sugar. The actual increased use of sweeteners appears to be due to the 139-percent gain in noncaloric sweeteners since 1978. Aspartame is the newest artificial sweetener and in 1985 it became the most used noncaloric sweetener. Only 0.2 pound (sugar equivalent) of aspartame was used per capita in 1981, but by 1985 it had expanded to approximately 11 pounds.

The 1985 farm bill includes little or no change for the sugar program. Therefore, it appears that demand for corn sweeteners will remain strong. However, it does appear that the pricing structure in the HFCS market will change. The industry is attempting to get away from pricing its product on an annual basis and move to a quarterly system to take advantage of the stronger demand which occurs during the summer months. Another development is the possibility that the Minneapolis Grain Exchange may offer a futures contract for the HFCS market.

Corn Use in HFCS Production



Sales of gasohol in the United States reached an estimated 7.6 billion gallons in calendar year 1985. Since gasohol is a blend of 1 part ethanol to 9 parts gasoline, 7.6 billion gallons would require approximately 760 million gallons of ethanol. However, it is important to remember that the 760-million figure includes imported ethanol and ethanol made from other products such as sugar or molasses, sorghum, cull potatoes, fruit, and barley. Therefore, it is estimated that

Corn use in alcohol production

Marketing year	Wet-milled		Dry-milled		Total
	Fuel	Beverage 1/	Fuel	Beverage	
Million bushels					
1979	10	20	0	20	50
1980	20	20	15	20	75
1981	55	30	25	10	120
1982	100	30	40	10	180
1983	120	30	40	10	200
1984	120	30	80	10	240
1985 2/	140	30	100	10	280

1/ Also includes nonfuel industrial alcohol.
2/ Projected.

approximately 600 million gallons of U.S. ethanol were produced from corn.

Annual capacity for the U.S. ethanol industry at the end of 1985 was slightly over 900 million gallons. Low gasoline prices and an uncertain future for State and Federal tax incentives has slowed expansion plans for some firms. Expansion in ethanol production continues to come from the dry-millers with little change for the wet-millers. Wet-millers once produced 65-75 percent of all ethanol but that has dropped below 55 percent. However, the future still looks good for the industry on the whole because of ethanol's new role as an octane booster, provided the recent tax incentives remain.

Brazil voluntarily stopped exporting ethanol to the United States last October to help resolve a continuing dispute over tariffs. However, a preliminary finding by the U.S. International Trade Commission states that Brazil had been subsidizing its ethanol. This was recently followed by a similar finding from the U.S. Commerce Department which recommended that Brazil pay a sizable "anti-dumping" duty for any ethanol exported to the United States. The outcome of this dilemma ultimately rests with the U.S. International Trade Commission.

Snack foods and other products made from corn flour continue to provide strong demand for the dry-milled and alkaline cooked industries. Corn use in beer has stabilized after peaking in the late 1970's.

FEED DEMAND

The 1985/86 marketing year projection of feed and residual disappearance for the four feed grains was recently reduced by 4 million metric tons. All of this decline was attributable to a 5-million-ton drop in the corn feed estimate, which was partly offset by increases in sorghum and oat feeding projections.

For October-December 1985, feed and residual use of the four feed grains and wheat was 52.4 million tons, 2 million below a year earlier. Feeding for the rest of the feed year may keep up with a year earlier, but more wheat and other early feed grains will replace corn as corn free supplies tighten and lower new-crop loan rates take effect.

Beef production for the 1985/86 feed year is expected to total about 3.5 percent less than for the preceding year, but poultry meat production is expected to increase by 5 percent largely offsetting red meat declines. However, beef production in 1985/86 will likely include more meat from the slaughter of dairy cows resulting from the whole-herd buyout program in the 1985 dairy legislation. However, the effects of the whole-herd buyout program are still uncertain.

Last October 1 the number of cattle on feed in the 13 quarterly reporting States was down 12 percent from a year earlier and down 9 percent on January 1. Increased numbers of yearling cattle for placement on feed this spring could bring cattle on feed near year-earlier numbers for the last quarter of the feed year. If crop growing conditions are normal this year, feed costs would decline sharply in the late summer and fall resulting in increased numbers of lighter weight cattle being fed in the 1986/87 feed year. Cattle feeding during the next four years will be limited by the reduced size of the beef breeding herd resulting from 4 years of liquidation--particularly if a cattle cycle is generated by improved feeder cattle prices, leading to a diversion of heifers from feedlots to herd expansion.

The 10-State inventory of hogs and pigs declined 3 percent in December 1985 from a year earlier. The breeding herd is down 2 percent and market hogs 3 percent. However,

that won't necessarily mean a reduction in productive capacity. The combination of increased pigs saved per litter and heavier slaughter weights could make up for the decline in inventory.

Lower feed prices in 1986 and into 1987 could spark an expansion, but hog producers are still just breaking even on average. Furthermore, continued heavy slaughter weights and unanticipated competition from other meats could depress prices, choking off any expansion.

The main source for optimism for feed producers is the poultry industry. Cheaper feed and stable meat prices have led to continued increases in poultry meat production for both broilers and turkeys. Demand by dairy producers currently remains strong, but cuts in dairy price supports and herd buyouts could substantially cut feed demand in the near future.

WORLD COARSE GRAIN SITUATION

The Food Security Act of 1985 has various export promotion mechanisms to improve U.S. corn and sorghum sales. The biggest single stimulus to exports will come from reduced loan rates for coarse grains. High loan rates, along with other factors such as the high-valued dollar, cut U.S. corn sales from 50 million tons in 1981/82 to just over a forecast 41 million in 1985/86—a decline of 17 percent. At the same time, global sales declined by only 8 percent, resulting in a marked erosion in U.S. market share, while other major exporters illustrated a willingness to expand sales at almost any cost.

The legislation gives the Secretary the authority to reduce loan levels below the base loan rate if, in his judgment, such rates are needed to make U.S. exports competitive. As a result, the 1986 corn loan was reduced from the legislated \$2.40 per bushel to 80 percent of that, or \$1.92 (under \$76 per ton).

This legislation likely will have a marginal impact on export activity in the near term. Already, in roughly the first quarter of the

crop year, over 50 percent of the 1985/86 export forecast has been either shipped or sold. During the next few months, sales activity should continue at a brisk pace. However, sales in the summer quarter will likely suffer considerably as importers delay purchases in anticipation of sharply reduced prices.

The Secretary may further increase the competitive position of the United States in global coarse grain trade by using the new marketing loan program which allows corn loans to be repaid at either 70 percent of the legislated loan rate or the "world market price". The Secretary may also use commodity credit guarantees or the Findley Amendment to significantly reduce loan rates and export prices in subsequent years.

Many factors outside the control of the Secretary will also impact heavily on global and U.S. coarse grain sales. Foremost is the response of foreign producers to the new farm bill. Foreign production is forecast at 570 million tons in 1985/86, only slightly below the previous year despite smaller crops in the EC and China. If production among the major foreign exporters continues high, competition for sales will increase. Southern Hemisphere exporting countries are likely to ship as much of their crop as possible before September or October when U.S. price supports will fall.

If production continues climbing among importing nations, global trade could continue to decline. Also, the lag between lower feed prices and increased coarse grain demand for animal product production is as long as 2 years. Nevertheless, U.S. exports could increase significantly in 1986/87, as reduced prices will make U.S. coarse grains more competitive, leading to increased market share as well as permitting a modest expansion in global import demand.

The value of the dollar, global economic recovery, and production and prices of competing commodities (feed wheat, other grains, and other grain substitutes and complements) will all affect the United States and its position in global coarse grain trade.

RECENT CHANGES IN THE COMPETITIVE POSITION FOR U.S. GRAIN SORGHUM GROWING AREAS

by

Warren R. Grant

Fred T. Cooke, Jr. 1/

Abstract: U.S. grain sorghum production is shifting regionally. During 1975-79 to 1984-85, sharp reductions in Texas, Oklahoma, and California acreages were more than offset by increased sorghum plantings in the mid-South, Southeast, and Kansas. Wheat and corn replaced sorghum in the States with declining sorghum acreage. Sorghum primarily replaced soybeans and cotton in the States with increasing acreage. Expected returns were an important factor in some of these acreage shifts. Government programs, double cropping, variability of returns, feed demand, and rotations had minor to modest impacts on these adjustments. **Keywords:** Grain sorghum, adjustments, returns, regional shifts.

Introduction

In 1985, U.S. farmers harvested 1.1 billion bushels of grain sorghum from 16.7 million acres in 23 States (7). Four States--Texas, Kansas, Nebraska, and Missouri--have dominated U.S. grain sorghum production since 1960. However, during the 1980's, grain sorghum production began a major shift to States along the Mississippi River and eastward (figure 1). During 1975-79, the mid-South and Southeast harvested less than 10 percent of the U.S. grain sorghum area. Acreage estimates for these States in 1985 indicated an increase to over 30 percent of the U.S. total. 2/ U.S. grain sorghum acreage rose slightly from 14.1 million in 1975-79 to 16.7 million in 1985. However, not all States shared in the increase (figure 1). Texas, Oklahoma, Arizona, California, Nebraska, Iowa, Indiana, Virginia, and North Carolina all showed modest to sharp declines in acreage harvested.

1/ Agricultural economists, Crops Branch, National Economics Division, Economic Research Service, U.S. Department of Agriculture.

2/ A further sign of grain sorghum growth as a major crop in the mid-South was reported by Maum (3). He states that some country elevator operations in the mid-South installed grain dryers and learned how to handle sorghum during the period of acreage expansion.

This paper examines the shift in grain sorghum production, its possible causes, and other crops affected. Why did some grain sorghum States increase acreage while others decreased it? Is expansion or contraction related to the profitability of grain sorghum compared with alternative enterprises, variability of returns, the features of Government programs, broiler feed demand, or better control of cyst nematodes in the soybean rotation?

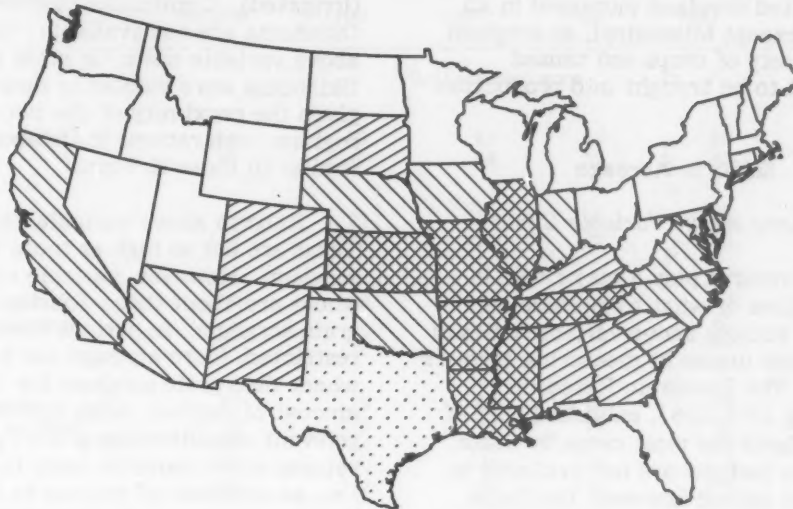
Other Crops Affected

Shifts in grain sorghum acreage usually affected acreage in other crops. The States with major changes in grain sorghum acreage were grouped into declining or increasing areas for analysis. Major crop acreage changes between 1975-79 and 1984-85 are summarized in table 1 and discussed below.

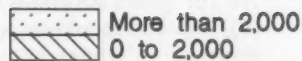
Declining States

In Texas, grain sorghum area fell sharply from 1975-79 to 1984-85, shifting primarily into wheat and idle land. Corn and hay area also rose, but not enough to offset the overall reduction in sorghum acreage. In California, corn or idle land probably replaced acreage formerly planted to sorghum. Cropland changes in Oklahoma were probably similar to

Shifts in Harvested Grain Sorghum Acres, 1975/79 to 1984/85



Declines



Increases

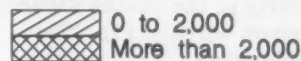


Table 1.—Change in planted crop acreages from 1975–79 to 1984–85, selected States

State	Corn	Sorghum	Wheat	Cotton	Oats	Barley	Rice	Soybeans	Hay 1/	All crops
1,000 acres										
Declining										
California	125	-162	-75	68	-61	-594	-45	0	-74	-808
Oklahoma	-54	-239	350	-92	-63	-30	0	-86	293	-868
Texas	65	-2,105	1,590	-919	-186	-44	-176	-246	1,027	-1,601
Increasing										
Arkansas	12	523	465	-363	-36	-72	78	-842	135	75
Illinois	160	327	-225	0	61	-10	0	350	-7	528
Kansas	-815	170	540	1	20	68	0	391	461	411
Louisiana	80	290	289	161	0	0	-61	-286	-39	311
Mississippi	-78	479	434	-184	0	0	20	-658	34	-21
Missouri	-430	621	290	-73	-32	0	48	434	35	809
Tennessee	72	335	145	9	-90	-23	0	-634	335	141

1/ Harvested acres.
Source: (7)

those in Texas, except that corn acreage declined. In all three States, planted acreage declined as producers idled additional acres between 1975–79 and 1984–85. Some of these idle acres probably had been planted to grain sorghum during the late 1970's.

Increasing States

States where sorghum acreage increased the most—Kansas and those bordering the Mississippi—generally had declines in acres planted to oats, barley, cotton, and soybeans

(table 1). In these States, increases in wheat and hay area were similar to those in States where grain sorghum area decreased. However, planted cropland increased in all these States, except Mississippi, as sorghum replaced a variety of crops and caused additional land to be brought into production.

Shifts In Acreage

Expected Returns Above Variable Costs

Expected returns play a major role in farmers' decisions of what to produce. A comparison of returns above variable costs of production is one means of measuring farmers' expectations. The Economic Research Service, during 1975-1983, published cost of production budgets for most crops by State. 3/ Double crop budgets are not available in the ERS budget series; however, the Farm Production Expenditures survey indicated 1.6 million acres of grain sorghum were double cropped in 1983, mostly in the States showing increased grain sorghum acreage (9). The returns above variable costs for single crop grain sorghum and competing crops are presented in table 2 for those States where grain sorghum budgets are available.

Declining States

Data indicate California, Texas, and Oklahoma were high-cost areas for grain sorghum production, especially irrigated production during the 1980's (10). 4/

3/ The Economic Research Service revised its method of tabulating and publishing costs of production in 1981 from the variable-fixed cost concept to the cash-economic cost concept (8). State budgets were published under the former format, but were discontinued under the revised format.

4/ With dwindling plantings, official estimates for grain sorghum production were discontinued for Iowa, Indiana, and Virginia in 1985. The reduction in Nebraska grain sorghum acreage between 1975-79 and 1984-85 was relatively small. Other States show an increased acreage.

Returns above variable costs were greater for corn than grain sorghum in Texas (both irrigated and dryland) and California (irrigated). Continuous cost series for corn in Oklahoma are not available. However, returns above variable costs for grain sorghum in Oklahoma were similar to those in Texas, and given the proximity of the two producing regions, corn returns in Oklahoma should be similar to those in Texas.

Returns above variable costs for wheat in Texas are not as high as those from grain sorghum. However, variable costs per acre of wheat are about three-fourths of those for grain sorghum. In periods when capital is restricted, more acreage can be planted to wheat than grain sorghum for the same amount of capital. With this situation, a relevant consideration is the ratio of per-acre returns above variable costs to variable costs, i.e., an estimate of returns to capital, the limiting resource. During 1982-1984, the ratio varied from .79 to 1.25 for wheat and .67 to .98 for grain sorghum in the Southern Plains (8), a definite advantage to wheat. The increase in wheat acreage in Texas equaled about 75 percent of the decrease in grain sorghum acreage.

Increasing States

In general, the States showing increases in grain sorghum acreage had lower variable costs per bushel than States showing decreases. The data in table 2 show a modest advantage to soybeans over grain sorghum in Arkansas, Missouri, Mississippi, and Kansas. However, this advantage decreased in Missouri after 1980. With relatively low soybean prices in 1985, the advantage may have shifted to grain sorghum. Cost of production budgets by States are not available from ERS after 1983. When applied to prices received by farmers in August 1985, cost data for 1985 published by the Mississippi and Arkansas Agricultural Extension Services show a continuation of the trend evident in the ERS budgets (5, 6, 11). 5/

The changes in planted acres shown in table 1 indicate Missouri and Kansas producers may have planted grain sorghum on land not planted to crops during the late seventies or

5/ ERS budgets for grain sorghum are not available for Louisiana, Tennessee and Illinois.

Table 2.--Returns above variable costs, selected crops and States 1/

State and crop	Year					Coefficient of variation
	1975/79	1980	1981	1982	1983	
Dollars per acre						
Arkansas						
Dryland grain sorghum	54	10	41	27	NA	46.3
Dryland soybeans	85	45	54	59	NA	35.4
California						
Irrigated grain sorghum	43	93	22	11	107	64.3
Irrigated corn	174	372	233	172	250	34.6
Colorado						
Dryland grain sorghum	9	28	10	14	19	56.1
Irrigated grain sorghum	9	47	-18	20	60	173.0
Irrigated corn	101	146	104	135	184	26.8
Kansas						
Dryland grain sorghum	47	29	63	67	28	42.9
Irrigated grain sorghum	78	128	82	92	67	29.1
Dryland soybeans	82	64	108	78	64	24.1
Dryland corn	76	20	138	129	9	64.7
Irrigated corn	124	192	150	147	154	21.9
Mississippi						
Dryland grain sorghum	NA	84	38	4	50	75.1
Dryland soybeans	NA	114	69	47	103	37.0
Missouri						
Dryland grain sorghum	72	41	72	84	84	26.7
Dryland soybeans	116	112	112	96	92	18.8
Dryland corn	84	47	117	123	52	39.5
Nebraska						
Dryland grain sorghum	80	103	98	106	83	19.1
Irrigated grain sorghum	104	142	101	125	74	23.2
Dryland soybeans	129	152	157	126	140	21.9
Irrigated soybeans	159	180	154	120	213	22.3
Dryland corn	77	70	101	137	96	39.1
Irrigated corn	142	169	134	130	181	14.0
Oklahoma						
Dryland grain sorghum	14	7	28	29	NA	74.4
Irrigated grain sorghum	41	68	30	43	NA	55.5
Dryland wheat	43	47	25	50	NA	59.9
Irrigated wheat	50	58	37	50	NA	58.2
South Dakota						
Dryland grain sorghum	29	42	41	40	73	47.0
Dryland corn	48	95	81	108	97	47.9
Texas						
Dryland grain sorghum	38	18	62	52	NA	33.5
Irrigated grain sorghum	61	67	45	31	NA	36.0
Dryland corn	75	73	124	90	NA	26.0
Irrigated corn	122	118	125	127	NA	6.7
Dryland wheat	22	31	19	6	NA	93.2
Irrigated wheat	29	19	30	-22	NA	121.6

NA=Not available. 1/ State data were estimated from Firm Enterprise Data System (ERS) subregional cost of production budgets (10). This series was discontinued after 1983. 2/ Mississippi returns above variable costs were estimated using season average price and variable cost data published by Mississippi State University (11).

on corn acreage. The returns data for 1983 show an advantage to grain sorghum over corn (table 2).

Variability of Returns

The variability of expected returns above variable costs could influence the decision of what farmers produce. A comparison of the coefficient of variation (CV) of the returns above variable costs of selected crops is one way of measuring farmers' expectations of yield and price risks. ^{6/} The larger the CV, the greater the variability in returns. Thus, farmers choosing to lower risk would produce the crop with the lower CV, other factors being equal. These data are presented in table 2.

In most cases, income variability was greater for sorghum than for corn in States with declining sorghum acreage. However, variability of returns was less for sorghum than for wheat in Texas. In Arkansas and Mississippi, income variability was greater for grain sorghum than for soybeans, the main crop being replaced. In Missouri and Kansas, dryland grain sorghum had less income variability than dryland corn, the crop being replaced.

In some instances, income variability may have affected cropping decisions. However, results were mixed. Therefore, this measure of risk can not generally be said to explain acreage shifts.

Government Programs

Grain sorghum, corn, wheat, upland cotton, rice, and soybeans are under Government loan programs. All these crops, except soybeans, have target price protection. The Government loan program generally sets floor prices for these commodities while the target price program bolsters eligible producers' income with deficiency payments during periods when

^{6/} The budgets used to calculate returns above variable cost are aggregate annual estimates during 1975-1983. Thus, the coefficient of variation understates the variabilities a given producer faces, but they do give a relative comparison between crops.

prices are lower than the target level. Producers without base acreage start building a base with the first crop produced. Thus, once a producer builds base and gains eligibility, the features of the target price/deficiency payment program may give an additional advantage to crops covered. Since soybeans are not included under this program feature, sorghum may have an additional advantage once the producer becomes eligible for Government programs.

During 1975-85, sorghum producers received seven deficiency payments ranging from \$.13 to \$.46 per bushel. Thus, as much as \$28 per acre were added to returns over variable costs for growing sorghum, based on a typical program yield of 62 bushels per acre. Similarly, wheat producers received deficiency payments on seven wheat crops. Corn producers, received deficiency payments on four crops.

Set-aside or acreage diversion programs reduced cotton acreage in the 1980's. Soybeans, which compete for marginal cotton land in most States, were priced relatively low during 1984 and 1985, resulting in reduced acreage. As a result, the acreage diverted from cotton and not planted to soybeans was partially shifted to grain sorghum. This shift occurred in the States along and east of the Mississippi River. Land used for cotton production in these States is usually the most productive for all crops except rice.

Nematodes

Soybean production is affected by the cyst nematode. Continuous soybean production increases the number of nematodes and the likelihood of reduced yields. Rotation of soybeans with grain sorghum helps control the nematode population (4). Soybean yield increases attributed to including grain sorghum in the rotation range from 4 to 6 bushels with low to no nematode problem, to up to 10 bushels with severe nematode infestations. Thus, in areas where the cyst nematode is a problem, grain sorghum in rotation with soybeans has increased. Current research, however, is centering on developing nematode-resistant soybean varieties.

Broiler Feed Demand

Over one-half the U.S. commercial broiler production in 1984 came from Arkansas, Alabama, Georgia, and Mississippi, all States showing increased grain sorghum production since 1980. Did the broiler demand for feed prompt this increase?

Sorghum is a substitute in animal feeds for corn, and typically has a feed value of 95 percent relative to corn for poultry feeding. When the sorghum-to-corn price ratio falls below .95, feed mills have an incentive to substitute sorghum for corn. Many feed mills in these States have grain sorghum in their formulas; however, mills want to be sure of an adequate supply before they start using grain sorghum. Increases in sorghum acreage in these broiler-producing States certainly lessen this concern.

Table 3 shows that average sorghum-to-corn price ratios prior to 1981—the year sorghum acreage increased noticeably in these States—were not greatly different from the average ratios during 1981–84. Most of the prices ratios fell short of the sorghum feed value of 0.95. The ratios suggest that the broiler feed demand effect was at best modest, although it may have contributed to the expansion of sorghum

acreage in these States. Any demand-pull effects did not outweigh the price-depressing effect caused by the expanded sorghum acreage.

Double Cropping

Wheat-grain sorghum double cropping has not played a major role in the expansion of grain sorghum in the States along the Mississippi River, but appeared to be important in the Southeast (table 4). Grain sorghum usually is planted 1 to 2 months before wheat is harvested in the States along the Mississippi River. Due to the low rainfall normally experienced in August and September in the mid-South, grain sorghum planted after wheat does not produce yields equal to earlier plantings without irrigation in most years. Also, grain sorghum planted after the wheat harvest would result in harvest conflicts with rice and soybeans. In the Southeast, double cropping of grain sorghum and wheat was extensive in 1984 and has contributed to grain sorghum expansion during the 1980's (table 4). Slightly different weather patterns and less labor-machinery conflicts than in the mid-South could make double cropping in the Southeast more profitable than single cropping. However, double crop budgets for grain sorghum-wheat are not available to verify this.

Table 3.—Sorghum-to-corn farm price ratios and sorghum harvested acres in selected broiler-producing States; 1978–84 marketing year

State	1978	1979	1980	1981	1982	1983	1984
Sorghum-to-corn price ratio							
Alabama	.97	.90	.82	.93	.89	.88	.83
Arkansas	.75	.82	.81	.78	.80	.86	.78
Georgia	.74	.85	.86	.76	.74	.87	.85
Mississippi	.82	.72	.76	.70	.74	.87	.74
U.S.	.92	.97	.92	.96	.96	.88	.90
Sorghum acres (1,000)							
Alabama	34	28	34	58	68	65	180
Arkansas	200	176	203	298	263	320	590
Georgia	43	49	82	135	135	68	113
Mississippi	21	33	38	88	110	225	370
U.S.	13,581	12,949	12,513	13,677	14,137	9,836	15,348

Table 4.--Estimated percent of grain sorghum double cropped, 1984

State	Double cropped	Harvested	Percent double cropped
	- Acres -		Percent
Southeast			
Alabama	81,159	180,000	45.1
Georgia	109,926	113,000	97.3
North Carolina	26,742	48,000	55.7
South Carolina	27,951	34,000	82.2
Virginia	10,834	10,000	108.3
Mid South			
Arkansas	50,845	590,000	8.6
Louisiana	21,208	269,000	7.9
Kentucky	25,252	115,000	22.0
Mississippi	18,048	370,000	4.9
Tennessee	54,422	260,000	20.9
Corn Belt			
Illinois	59,375	285,000	20.8
Indiana	4,647	13,000	35.7
Iowa	537	12,000	4.5
Missouri	127,333	1,330,000	9.6
Central			
Colorado	17,000	430,000	4.0
Kansas	286,212	4,250,000	6.7
Nebraska	4,200	1,900,000	0.2
South Dakota	0	395,000	.0
Southwest			
Arizona	1,100	16,000	6.9
California	49,356	48,000	102.8
New Mexico	35,090	280,000	12.5
Oklahoma	73,040	450,000	16.2
Texas	196,843	3,950,000	5.0
United States	1,301,910	15,348,000	8.5

Source: (1,7).

Conclusion

Producers continually search for alternative crops to improve their returns. The adjustments occurring with U.S. grain sorghum are part of this process. Producers in the States with major declines in sorghum production are replacing grain sorghum acreage with corn, wheat, or leaving the land idle. The increased idle land (over 3 million acres in Texas, Oklahoma, and California) implies a future potential for expanding crop production in these States. Producers in the States with major increases in sorghum production are replacing primarily soybeans, corn, cotton, and idle land with grain sorghum.

This analysis of factors associated with the shift in grain sorghum production leads to the following conclusions:

- 1) Expected returns and the variability of those returns are important in the decision of what crops producers plant and are affecting sorghum acreage shifts in some States.
- 2) Government programs, including acreage diversion, set-aside, nonrecourse loans, and target price-deficiency payment programs, are influencing grain sorghum production. Cross-compliance between commodities, if imposed on 1986 or subsequent crop years, would decrease sorghum acreage.
- 3) Double cropping of wheat with sorghum and the inclusion of grain sorghum in rotation with soybeans for better control of soybean cyst nematodes tend to increase sorghum plantings, but to a lesser extent than points 1) and 2).
- 4) Broiler feed demand for sorghum relative to corn is not a prime factor influencing increased sorghum acreage in the mid-South and the Southeast, although this demand may grow with the increased sorghum production.

If expected returns and Government programs maintain the same relationships between alternative crops, then grain sorghum production will continue the regional shifts now evident. It is questionable, however, that large increase in sorghum plantings as occurred in recent years will continue in any region.

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Table 1.—Feed grains: Marketing year supply, disappearance, area, and prices, 1980/81–85/86 1/

[illegible]

1/ Aggregated data on corn, sorghum, barley, and oats. 2/ The marketing year for corn and sorghum begins October 1; for oats and barley, June 1. 3/ Includes total Government loans (original and resale). 4/ Projected. Final outcome expected to fall within the implied range 2 out of 3 times. 5/ Excludes support payments. 6/ Disaster payments. 7/ Deficiency and disaster payments. 8/ Deficiency and diversion payments. 9/ Deficiency payments.

Table 2.--Corn: Marketing year supply and disappearance, area, and prices, 1980/81-85/86

Year beginning October	Supply			Disappearance			Ending stocks Sept. 30							
	Begin- ning stocks	Produc- tion	Imports	Domestic use			Exports	Total disap- pearance	Govt. owned	Privately owned	Total			
				Food 1/	Alc. 2/	Bever- ages						Seed 2/	Feed and residual	Total
Million bushels														
1980/81	1,617.1	6,639.4	1.2	8,257.7	641.8	73.3	20.2	4,132.9	4,868.2	2,355.2	7,223.4	237.8	796.5	1,034.3
1981/82	1,034.3	8,118.7	1.2	9,154.2	709.4	82.7	19.4	4,201.8	5,013.3	1,966.9	6,980.2	302.4	1,871.6	2,174.0
1982/83	2,174.0	8,235.1	0.9	10,410.0	774.3	109.0	14.5	4,522.3	5,420.1	1,870.0	7,290.1	1,166.3	1,953.6	3,119.9
1983/84	3,119.9	4,174.7	2.5	7,297.1	868.9	85.0	18.9	3,735.9	4,708.7	1,865.2	6,573.9	334.0	389.2	723.2
1984/85	723.2	7,674.0	3.3	8,400.5	--	1,065.0	--	4,116.7	5,181.7	1,838.1	7,019.8	271.6	1,109.1	1,380.7
1985/86 4/	1,380.7	8,865.0 (+ 227)	1.8	10,247.5 (+ 227)	--	1,120.0 (+ 35)	--	4,100.0 (+ 300)	5,220.0 (+ 300)	1,625.0 (+ 150)	6,845.0 (+ 450)		3,402.5 (+ 350)	
Area														
National program	Set-aside and diverted	Planted	Harvested for grain	Yield per acre	Harvested by farmers 5/	Average prices			Government-support program					
						St. Louis No. 2 Yellow	Omaha No. 2 Yellow	Gulf Ports No. 2 Yellow	National average loan rate	Target price payments to participants	Total			
----- Million acres ----- Bushels ----- Dollars per bushel ----- Mill. dol.														
1980/81	---	84.0	73.0	91.0	3.11	3.35	3.13	3.54	2.25	2.35	2.35	7/ 280		
1981/82	---	84.1	74.5	108.9	2.50	2.61	2.46	2.83	2.40	2.40	2.40	7/ 92		
1982/83	2.1	81.9	72.7	113.2	2.68	2.98	2.82	3.16	2.55	2.70	2.70	8/ 292		
1983/84	32.2	60.2	51.5	81.1	3.25	3.45	3.20	3.63	2.65	2.86	2.86	9/ 904		
1984/85	4.0	80.5	71.9	106.7	2.62	2.75	2.60	2.94	2.55	3.03	3.03	10/ 1,652		
1985/86	5.4	83.3	75.1	118.0	2.30-2.50	6/ 2.48	6/ 2.31	6/ 2.72	2.55	3.03	3.03	10/ 2,500		

1/ Includes industrial products. 2/ Malt beverage and distilled liquor products converted to a corn basis. 3/ Includes quantity under loan and farmer-owned reserve. 4/ Projected. Final outcome expected to fall within the implied range 2 out of 3 times. 5/ Excludes support payments. 6/ October 1985-January 1986 average. 7/ Disaster payments. 8/ Deficiency and disaster payments. 9/ Diversion payments. 10/ Deficiency payments.

Table 3.--Sorghum: Marketing year supply and disappearance, area, and prices, 1980/81-85/86

Year beginning October 1	Supply			Disappearance				Ending stocks Sept. 30		
	Begin- ning stocks	Produc- tion	Imports	Domestic use		Exports	Total	Govt. owned	Privately owned	Total
				Alc.	Food					
				bayer- ages	Seed and residual					
Million bushels										
1980/81	146.4	579.3	---	5.0	4.3	2.0	301.3	312.6	304.6	617.2
1981/82	108.5	875.8	---	4.3	4.8	2.0	427.7	438.8	249.1	687.9
1982/83	296.4	835.1	---	4.2	3.9	1.8	506.9	516.8	214.5	731.3
1983/84	400.2	487.5	0.1	4.2	3.7	2.1	380.6	390.6	246.4	637.0
1984/85	250.8	866.2	0.1	1,117.1	--	20.1	526.6	546.7	299.4	846.1
1985/86 2/	271.0	1,112.6 (+ 46)	---	--	19.7	--	575.0 (+ 50)	594.7 (+ 55)	275.0 (+ 35)	869.7 (+ 65)
Average prices										
Area			Yield		per		Received		Government-support program	
National program	Set-aside and diverted	Planted	Harvested for grain	acres	harvested per acre	by farmers 3/	Kansas City		National	
							No. 2	No. 2	average	Target
							Yellow	Yellow	loan	price
									rate	participants
Dollars per cwt.										
1980/81	12.8	15.6	12.5	46.3	5.25	5.36	5.86	6.16	3.82	4.46
1981/82	14.3	15.9	13.7	64.0	4.25	4.29	4.85	4.97	4.07	4.55
1982/83	---	16.0	14.1	59.1	4.50	4.96	5.30	5.55	4.32	4.64
1983/84	---	11.9	10.0	48.7	5.07	5.13	5.48	5.65	4.50	4.86
1984/85	---	17.3	15.4	56.4	4.27	4.38	4.95	4.81	4.32	5.14
1985/86	---	18.3	16.7	66.7	3.75-4.11	4/ 3.82	4/ 4.41	4/ 4.32	4.32	5.14
										8/ 225

1/ Includes quantity under loan and farmer-owned reserve. 2/ Projected. Final outcome expected to fall within the implied range 2 out of 3 times. 3/ Excludes support payments. 4/ October 1985-January 1986 average. 5/ Disaster payments. 6/ Deficiency and disaster payments. 7/ Diversion payments. 8/ Deficiency payments.

Table 5.--Oats: Marketing year supply and disappearance, area, and prices, 1980/81-85/86

[illegible]

1/ Includes quantity under loan and farmer-owned reserve. 2/ Projected. Final outcome expected to fall within the implied range 2 out of 3 times. 3/ Not included in the program until 1982. 4/ Excludes support payments. 5/ June 1985-January 1986 average. 6/ Deficiency and diversion payments. 7/ Deficiency payments.

Table 6.—Feed grains: Feed year supply and disappearance, specified periods, 1980/81–85/86
(corn, sorghum, barley, oats)

Year and periods beginning October 1	Supply			Total	Disappearance				Ending stocks		
	Begin- ning stocks	Produc- tion	Imports		Domestic use			Exports	Total disap- pearance	Privately:	
					Food	Alc. ages	Seed and residual			Govt. owned	owned 1/
Million metric tons											
1980/81											
Oct.-Dec.	60.4	183.4	0.1	243.9	3.7	1.2	0.1	45.3	50.3	20.7	71.0
Jan.-Mar.	172.9	---	0.1	173.0	3.2	1.3	0.3	32.1	36.9	18.7	55.6
Apr.-May	117.4	---	2/	117.4	2.8	1.0	0.8	20.8	25.4	11.3	36.7
June-Sept.	80.7	17.7	0.1	98.5	7.5	1.9	0.2	24.7	34.3	18.8	53.1
Mkt. year	60.4	201.1	0.3	261.8	17.2	5.4	1.4	122.9	146.9	69.5	216.4
1981/82											
Oct.-Dec.	45.4	228.5	0.1	274.0	4.1	1.2	0.1	46.3	51.7	16.6	68.3
Jan.-Mar.	205.7	---	0.1	205.8	3.5	1.4	0.3	36.3	41.5	14.8	56.3
Apr.-May	149.5	---	0.1	149.6	3.1	1.0	0.9	19.8	24.8	11.2	36.0
June-Sept.	113.6	19.8	0.1	133.5	8.2	1.9	0.2	25.7	36.0	15.8	51.8
Mkt. year	45.4	248.3	0.4	294.1	18.9	5.5	1.5	128.1	154.0	58.4	212.4
1982/83											
Oct.-Dec.	81.7	230.4	0.1	312.2	4.7	1.4	0.1	46.5	52.7	14.9	67.6
Jan.-Mar.	244.6	---	0.1	244.7	3.8	1.5	0.2	40.2	45.7	14.8	60.5
Apr.-May	184.2	---	0.1	184.3	3.3	1.0	0.9	24.4	29.6	8.3	37.9
June-Sept.	146.4	18.0	0.3	164.7	8.8	2.1	0.2	29.5	40.6	16.1	56.7
Mkt. year	81.7	248.4	0.6	330.7	20.6	6.0	1.4	140.6	168.6	54.1	222.7
1983/84											
Oct.-Dec.	108.0	118.4	0.1	226.5	5.3	1.2	0.1	49.3	55.9	15.7	71.6
Jan.-Mar.	154.9	---	0.2	155.1	4.3	1.4	0.2	29.4	35.3	15.5	50.8
Apr.-May	104.3	---	0.1	104.4	4.0	1.0	1.1	18.1	24.2	9.6	33.8
June-Sept.	70.6	19.9	0.2	90.7	9.3	1.8	0.1	20.3	31.5	15.0	46.5
Mkt. year	108.0	138.3	0.6	246.9	22.9	5.4	1.5	117.1	146.9	55.8	202.7
1984/85											
Oct.-Dec.	44.2	216.9	0.2	261.3	5.6	1.4	0.1	53.9	61.0	18.2	79.2
Jan.-Mar. ^{3/}	182.1	---	0.2	182.3	- 6.2 -	-	0.1	36.0	42.3	16.4	58.7
Apr.-May	123.6	---	0.2	123.8	- 5.6 -	-	1.1	19.1	25.8	8.8	34.6
June-Sept.	89.2	20.4	0.2	109.8	- 12.2 -	-	0.1	21.8	34.1	12.1	46.2
Mkt. year	44.2	273.3	0.8	282.3	- 31.0 -	-	1.4	130.8	163.2	55.5	218.7
1985/86											
Oct.-Dec.	63.6	253.4	0.2	317.2	- 7.4 -	-	0.1	52.8	60.3	14.6	74.9
									</		

^{1/} Includes quantity under loan and farmer-owned reserve. ^{2/} Less than 50,000 metric tons. ^{3/} Beginning 1985 food and alcohol combined.

Table 7.--Corn: Marketing year supply and disappearance, specified periods, 1980/81-85/86

Year and periods beginning October 1	Supply			Total	Disappearance					Ending stocks					
	Production	Imports	Total		Domestic use			Exports	Total disappearance	Privately owned					
					Food	Alc.	Seed			Feed and residual	Govt. owned	Total			
				l/	bever-	ages 2/									
Million bushels															
1980/81															
Oct.-Dec.	1,617.1	6,639.4	0.2	8,256.7	136.3	16.6	---	1,519.3	1,672.2	727.8	2,400.0	254.3	5,602.4	5,856.7	
Jan.-Mar.	5,856.7	---	0.3	5,857.0	116.3	18.3	4.0	1,099.4	1,238.0	632.9	1,870.9	250.0	3,736.1	3,986.1	
Apr.-May	3,986.1	---	0.1	3,986.2	106.7	13.8	12.2	684.3	817.0	395.7	1,212.7	251.6	2,521.9	2,773.5	
June-Sept.	2,773.5	---	0.6	2,774.1	282.5	24.6	4.0	829.9	1,141.0	598.8	1,739.8	237.8	796.5	1,034.3	
Mkt. year	1,617.1	6,639.4	1.2	8,257.7	641.8	73.3	20.2	4,132.9	4,868.2	2,355.2	7,223.4	237.8	796.5	1,034.3	
1981/82															
Oct.-Dec.	1,034.3	8,118.7	0.4	9,153.4	153.2	16.8	---	1,517.2	1,687.2	545.5	2,232.7	247.6	6,673.1	6,920.7	
Jan.-Mar.	6,920.7	---	0.3	6,921.0	128.4	20.2	3.9	1,180.9	1,333.4	489.4	1,822.8	261.7	4,836.5	5,098.2	
Apr.-May	5,098.2	---	0.1	5,098.3	119.4	15.2	12.1	662.5	809.2	409.0	1,218.2	269.7	3,610.4	3,880.1	
June-Sept.	3,880.1	---	0.4	3,880.5	308.4	30.5	3.4	841.2	1,183.5	523.0	1,706.5	302.4	1,871.6	2,174.0	
Mkt. year	1,034.3	8,118.7	1.2	9,154.2	709.4	82.7	19.4	4,201.8	5,013.3	1,966.9	6,980.2	302.4	1,871.6	2,174.0	
1982/83															
Oct.-Dec.	2,174.0	8,235.1	0.3	10,409.4	175.2	27.9	---	1,488.9	1,692.0	512.7	2,204.7	429.0	7,775.7	8,204.7	
Jan.-Mar.	8,204.7	---	0.2	8,204.9	140.0	28.0	1.3	1,329.7	1,499.0	507.9	2,006.9	483.4	5,714.6	6,198.0	
Apr.-May	6,198.0	---	0.1	6,198.1	125.0	17.6	10.3	812.8	965.7	308.5	1,274.2	491.7	4,432.2	4,923.9	
June-Sept.	4,923.9	---	0.3	4,924.2	334.1	35.5	2.9	890.9	1,263.4	540.9	1,804.3	1,166.3	1,953.6	3,119.9	
Mkt. year	2,174.0	8,235.1	0.9	10,410.0	774.3	109.0	14.5	4,522.3	5,420.1	1,870.0	7,290.1	1,166.3	1,953.6	3,119.9	
1983/84															
Oct.-Dec.	3,119.9	4,174.7	0.3	7,294.9	200.3	19.3	---	1,633.5	1,853.1	528.9	2,382.0	1,229.7	3,683.2	4,912.9	
Jan.-Mar.	4,912.9	---	0.8	4,913.7	160.0	22.4	1.1	969.1	1,152.6	509.9	1,662.5	1,198.2	2,053.0	3,251.2	
Apr.-May	3,251.2	---	0.7	3,251.9	155.0	16.7	15.5	579.9	767.1	339.7	1,068.8	818.6	1,326.5	2,145.1	
June-Sept.	2,145.1	---	0.7	2,145.8	353.6	26.6	2.3	553.4	935.9	486.7	1,422.6	334.0	389.2	723.2	
Mkt. year	3,119.9	4,174.7	2.5	7,297.1	868.9	85.0	18.9	3,735.9	4,708.7	1,865.2	6,573.9	334.0	389.2	723.2	
1984/85															
Oct.-Dec.	723.2	7,674.0	0.9	8,398.1	211.0	24.2	---	1,692.8	1,928.0	605.9	2,533.9	295.5	5,568.7	5,864.2	
Jan.-Mar.	5,864.2	---	0.3	5,864.5	- 200.8	-	0.6	1,149.5	1,350.9	548.1	1,899.0	255.9	3,709.6	3,965.5	
Apr.-May	3,965.5	---	1.0	3,966.5	- 190.1	-	15.0	618.9	824.0	307.0	1,131.0	253.9	2,581.6	2,835.5	
June-Sept.	2,835.5	---	1.1	2,832.9	- 419.5	-	3.8	654.4	1,077.7	377.1	1,454.8	271.6	1,109.1	1,380.7	
Mkt. year	723.2	7,674.0	3.3	8,400.5	-1,045.6	-	19.4	4,116.7	5,181.7	1,838.1	7,019.8	271.6	1,109.1	1,380.7	
1985/86															
Oct.-Dec.	1,380.7	8,865.0	1.2	10,246.9	- 225.0	-	---	1,599.6	1,854.6	515.5	2,370.1			7,876.8	

1/ Includes industrial products. 2/ Malt beverage and distilled liquor grain products converted to a corn basis. 3/ Includes quantity under loan and farmer-owned reserve. 4/ Beginning 1985 food and alcohol combined.

Table 8.--Sorghum: Marketing year supply and disappearance, specified periods, 1980/81-85/86

Year and beginning October 1	Supply			Disappearance					Ending stocks		
	Beginning stocks	Production	Imports	Total	Domestic use			Exports	Total	Govt. owned	Privately owned
					Food	Alc.	Feed and residual				
					ages	beverages	Seed				
Million bushels											
1980/81											
Oct.-Dec.	146.4	579.3	2/	725.7	1.6	1.2	---	194.9	66.2	261.1	43.7
Jan.-Mar.	464.6	---	2/	464.6	1.6	0.9	0.2	66.6	84.1	150.7	43.5
Apr.-May	313.9	---	2/	313.9	0.8	0.7	1.2	87.7	41.7	129.4	43.8
June-Sept.	184.5	---	2/	184.5	1.0	1.5	0.6	-36.6	112.6	76.0	38.2
Mkt. year	146.4	579.3	2/	725.7	5.0	4.3	2.0	301.3	304.6	617.2	38.2
1981/82											
Oct.-Dec.	108.5	875.8	2/	984.3	1.3	1.3	---	218.5	77.8	296.3	38.4
Jan.-Mar.	688.0	---	2/	688.0	1.3	1.3	0.2	149.4	74.3	226.5	38.2
Apr.-May	461.5	---	2/	461.5	0.5	0.8	1.2	57.7	21.8	82.0	38.3
June-Sept.	379.5	---	2/	379.5	1.2	1.4	0.6	4.7	75.2	83.1	42.9
Mkt. year	108.5	875.8	2/	984.3	4.3	4.8	2.0	427.7	249.1	687.9	42.9
1982/83											
Oct.-Dec.	296.4	835.1	2/	1,131.5	1.4	1.0	---	254.0	67.0	321.0	46.7
Jan.-Mar.	810.5	---	2/	810.5	1.2	1.0	0.1	124.3	62.7	189.3	47.8
Apr.-May	621.2	---	2/	621.2	0.4	0.6	0.8	76.2	14.1	92.1	54.0
June-Sept.	529.1	---	2/	529.1	1.2	1.3	0.9	54.8	70.7	128.9	175.6
Mkt. year	296.4	835.1	2/	1,131.5	4.2	3.9	1.8	506.9	214.5	731.3	175.6
1983/84											
Oct.-Dec.	400.2	487.5	---	887.7	1.3	1.1	---	170.8	62.1	232.9	189.3
Jan.-Mar.	654.8	---	---	654.8	1.3	0.7	0.2	107.4	77.8	185.2	175.3
Apr.-May	469.6	---	---	469.6	0.3	0.6	0.8	69.5	29.5	100.7	137.4
June-Sept.	368.9	---	0.1	369.0	1.3	1.3	1.1	41.2	77.0	118.2	98.8
Mkt. year	400.2	487.5	0.1	887.8	4.2	3.7	2.1	380.6	246.4	637.0	98.8
1984/85											
Oct.-Dec.	250.8	866.2	0.1	1,117.1	1.4	4.0	---	307.4	84.6	392.0	105.7
Jan.-Mar.	725.1	---	---	725.1	- 4.2 -	-	0.2	151.5	87.9	243.8	134.7
Apr.-May	481.3	---	---	481.3	- 2.5 -	-	1.6	78.8	37.6	120.5	135.6
June-Sept.	360.8	---	---	360.8	- 5.5 -	-	0.7	-5.7	89.3	89.8	129.1
Mkt. year	250.8	866.2	0.1	1,117.1	- 17.6 -	-	2.5	526.6	299.4	846.1	129.1
1985/86											
Oct.-Dec.	271.0	1,112.6	2/	1,383.6	- 5.4 -	-	---	340.8	52.9	393.7	989.9

1/ Includes quantity under loan and farmer-owned reserve. 2/ Less than 50,000 bushels. 3/ Beginning 1985 food and alcohol combined.

Table 9.—Barley: Marketing year supply and disappearance, specified periods, 1980/81-85/86

Year and periods beginning June 1	Supply			Total	Domestic use					Disappearance			Exports			Total			Ending stocks		
	Begin- ning stocks	Produc- tion	Imports		Food	Alc. bever- ages	Seed	and residual	Feed	Total	Exports	disap- pearance	Govt. owned	Privately owned	Total	Govt. owned	Privately owned	Total			
Million bushels																					
1980/81																					
June-Sept.	192.1	361.1	3.5	556.7	2.5	56.6	1.2	78.8	139.1	24.9	164.0	3.5	389.2	3.5	392.7	392.7					
Oct.-Dec.	392.7	---	2.3	395.0	1.7	33.9	2.2	32.2	70.0	21.4	91.4	3.5	300.1	3.5	303.6	303.6					
Jan.-Mar.	303.6	---	2.7	306.3	1.7	36.0	3.7	38.7	80.1	22.7	102.8	3.4	200.1	3.4	203.5	203.5					
Apr.-May	203.5	---	1.7	205.2	1.1	28.8	6.1	24.2	60.2	7.7	67.9	3.4	133.9	3.4	137.3	137.3					
Mkt. year	192.1	361.1	10.2	563.4	7.0	155.3	13.2	173.9	349.4	76.7	426.1	3.4	133.9	3.4	137.3	137.3					
1981/82																					
June-Sept.	137.3	473.5	2.4	613.2	2.5	54.7	1.3	75.4	133.9	32.6	166.5	3.3	443.4	3.3	446.7	446.7					
Oct.-Dec.	446.7	---	2.4	449.1	1.7	32.1	2.3	50.7	86.8	33.0	119.8	3.3	326.0	3.3	329.3	329.3					
Jan.-Mar.	329.3	---	2.7	332.0	1.7	37.2	4.0	41.7	84.6	23.1	107.7	3.3	221.0	3.3	224.3	224.3					
Apr.-May	224.3	---	2.1	226.4	1.0	27.1	8.7	30.4	67.2	11.4	78.6	3.3	144.5	3.3	147.8	147.8					
Mkt. year	137.3	473.5	9.6	620.4	6.9	151.1	16.3	198.2	372.5	100.1	472.6	3.3	144.5	3.3	147.8	147.8					
1982/83																					
June-Sept.	147.8	515.9	5.1	668.8	2.5	51.3	1.3	92.2	147.3	25.4	172.7	3.9	492.2	3.9	496.1	496.1					
Oct.-Dec.	496.1	---	1.9	498.0	1.8	32.1	2.8	40.7	77.4	6.5	83.9	4.8	409.3	4.8	414.1	414.1					
Jan.-Mar.	414.1	---	2.2	416.3	1.8	35.5	3.9	68.5	109.7	12.7	122.4	5.8	288.1	5.8	293.9	293.9					
Apr.-May	293.9	---	1.5	295.4	1.1	26.6	9.4	39.0	76.1	2.6	78.7	6.0	210.7	6.0	216.7	216.7					
Mkt. year	147.8	515.9	10.7	674.4	7.2	145.5	17.4	240.4	410.5	47.2	457.7	6.0	210.7	6.0	216.7	216.7					
1983/84																					
June-Sept.	216.7	508.9	3.4	729.0	2.5	50.9	1.2	135.5	190.1	23.4	213.5	9.3	506.2	9.3	515.5	515.5					
Oct.-Dec.	515.5	---	1.5	517.0	1.7	30.0	2.4	82.4	116.5	32.9	149.4	11.4	356.2	11.4	367.6	367.6					
Jan.-Mar.	367.6	---	1.2	368.8	1.7	35.2	3.9	34.0	74.8	25.1	99.9	12.0	256.9	12.0	268.9	268.9					
Apr.-May	268.9	---	1.0	269.9	1.1	26.4	12.4	30.5	70.4	10.1	80.5	11.9	177.5	11.9	189.4	189.4					
Mkt. year	216.7	508.9	7.1	732.7	7.0	142.5	19.9	282.4	451.8	91.5	543.3	11.9	177.5	11.9	189.4	189.4					
1984/85																					
June-Sept.	189.4	599.2	3.6	792.2	2.5	50.4	1.2	133.6	187.7	29.7	217.4	12.2	562.6	12.2	574.8	574.8					
Oct.-Dec.	574.8	---	3.0	577.8	1.7	30.5	2.8	75.2	110.2	30.7	140.9	13.0	423.9	13.0	436.9	436.9					
Jan.-Mar.	436.9	---	2.2	439.1	1.7	34.3	1.1	69.0	106.1	13.1	119.2	14.2	305.7	14.2	319.9	319.9					
Apr.-May	319.9	---	1.3	321.2	1.1	26.8	16.1	26.4	70.4	3.4	73.8	15.6	231.8	15.6	247.4	247.4					
Mkt. year	189.4	599.2	10.1	798.7	7.0	142.0	21.2	304.2	474.4	76.9	551.3	15.6	231.8	15.6	247.4	247.4					
1985/86																					
June-Sept.	247.4	589.2	1.8	838.4	2.5	50.4	0.1	118.8	171.8	11.8	183.6	29.5	625.3	29.5	654.8	654.8					
Oct.-Dec.	654.8	---	2.4	657.2	1.7	30.5	2.8	81.7	116.7	6.9	123.6										

1/ Includes quantity under loan and farmer-owned reserve.

Table 10. --Oats: Marketing year supply and disappearance, specified periods, 1980/81-85/86

Year and periods beginning June 1	Supply		Disappearance				Ending stocks			
	Begin- ning stocks	Produc- tion	Imports	Total	Domestic use		Exports	Total	Govt. owned	Privately owned
					Food	Seed and residual				
					bever- ages					
Million bushels										
1980/81										
June-Sept.	236.4	458.8	0.6	695.8	15.0	1.8	190.4	207.2	3.9	211.1
Oct.-Dec.	484.7	---	0.2	484.9	10.0	1.8	79.2	91.0	2.8	93.8
Jan.-Mar.	391.1	---	0.3	391.4	10.0	7.0	115.6	132.6	2.6	135.2
Apr.-May	256.2	---	0.2	256.4	6.0	22.4	47.0	75.4	4.0	79.4
Mkt. year	236.4	458.8	1.3	696.5	41.0	33.0	432.2	506.2	13.3	519.5
1981/82										
June-Sept.	177.0	509.5	0.3	686.8	16.0	2.0	207.2	225.2	3.2	228.4
Oct.-Dec.	458.4	---	0.2	458.6	10.0	2.0	80.2	92.2	1.2	93.4
Jan.-Mar.	365.2	---	0.2	365.4	10.0	7.3	111.4	128.7	1.2	129.9
Apr.-May	235.5	---	0.9	236.4	5.2	24.1	54.2	83.5	1.0	84.5
Mkt. year	177.0	509.5	1.6	688.1	41.2	35.4	453.0	529.6	6.6	536.2
1982/83										
June-Sept.	151.9	592.6	0.8	745.3	16.2	2.0	167.7	185.9	1.3	187.2
Oct.-Dec.	558.1	---	0.2	558.3	10.0	2.0	92.0	104.0	1.0	105.0
Jan.-Mar.	453.3	---	1.6	454.9	10.7	7.6	117.3	135.6	0.3	135.9
Apr.-May	319.0	---	1.3	320.3	4.8	31.7	63.6	100.1	0.4	100.5
Mkt. year	151.9	592.6	3.9	748.4	41.7	43.3	440.6	525.6	3.0	528.6
1983/84										
June-Sept.	219.8	477.0	11.7	708.5	15.8	1.9	184.8	202.5	0.8	203.3
Oct.-Dec.	505.2	---	4.9	510.1	9.9	1.9	118.8	130.6	0.7	131.3
Jan.-Mar.	378.8	---	10.6	389.4	10.5	7.4	101.2	119.1	0.3	119.4
Apr.-May	270.0	---	2.9	272.9	4.7	25.4	61.4	91.5	0.3	91.8
Mkt. year	219.8	477.0	30.1	726.9	40.9	36.6	466.2	543.7	2.1	545.8
1984/85										
June-Sept.	181.1	473.7	5.8	660.6	15.7	1.9	167.3	184.9	0.6	185.5
Oct.-Dec.	475.1	---	9.1	484.2	10.0	5.3	110.5	125.8	0.3	126.1
Jan.-Mar.	358.1	---	12.1	370.2	10.4	5.6	97.6	113.6	0.2	113.8
Apr.-May	256.4	---	7.0	263.4	4.9	20.4	58.0	83.3	0.2	83.5
Mkt. year	181.1	473.7	34.0	688.8	41.0	33.2	433.4	507.6	1.3	508.9
1985/86										
June-Sept.	179.9	518.6	5.8	704.3	15.7	2.0	175.2	192.9	0.4	193.3
Oct.-Dec.	511.0	---	6.2	517.2	10.0	5.0	123.1	138.1	0.5	138.6

1/ Includes quantity under loan and farmer-owned reserve.

Table 11.—Average prices received by farmers, United States, by months, 1980-86

Item and year beginning October 1	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average weighted by sales 1/
Dollars per bushel													
Corn													
1980	2.99	3.10	3.19	3.19	3.22	3.25	3.24	3.24	3.17	3.14	2.87	2.55	3.11
1981	2.45	2.34	2.39	2.54	2.44	2.46	2.55	2.60	2.57	2.50	2.30	2.15	2.50
1982	1.98	2.13	2.26	2.36	2.56	2.71	2.95	3.03	3.04	3.13	3.35	3.32	2.68
1983	3.15	3.17	3.15	3.15	3.11	3.21	3.32	3.34	3.36	3.30	3.12	2.90	3.25
1984	2.65	2.55	2.56	2.64	2.62	2.67	2.70	2.68	2.64	2.60	2.44	2.29	2.62
1985	2.12	2.20	2.29	*2.33									
Dollars per cwt													
Sorghum													
1980	5.36	5.48	5.49	5.48	5.33	5.17	5.25	5.16	5.03	4.84	4.55	4.07	5.25
1981	3.90	3.87	3.95	4.09	4.08	4.00	4.10	4.35	4.17	3.96	3.95	3.80	4.25
1982	3.70	3.78	3.97	4.09	4.42	4.67	4.92	5.05	5.05	5.03	5.29	5.26	4.50
1983	5.01	4.98	4.93	4.92	4.74	4.85	5.00	5.08	4.94	4.64	4.59	4.24	5.07
1984	4.05	4.04	4.15	4.16	4.10	4.24	4.46	4.54	4.52	4.04	3.84	3.27	4.27
1985	3.30	3.47	3.76	*3.72									
Item and year beginning June 1	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average weighted by sales 1/
Dollars per bushel													
Oats													
1980	1.48	1.50	1.53	1.63	1.65	1.84	1.92	1.98	2.01	2.08	2.05	2.05	1.79
1981	1.99	1.84	1.72	1.74	1.78	1.88	1.94	1.97	1.99	2.02	1.99	1.99	1.89
1982	1.88	1.57	1.39	1.35	1.32	1.40	1.44	1.46	1.48	1.49	1.54	1.54	1.49
1983	1.51	1.46	1.45	1.55	1.62	1.67	1.73	1.81	1.88	1.81	1.82	1.84	1.67
1984	1.80	1.68	1.62	1.60	1.69	1.64	1.72	1.74	1.69	1.68	1.68	1.60	1.69
1985	1.59	1.31	1.16	1.10	1.08	1.14	1.20	*1.20					
Barley													
1980	2.36	2.52	2.59	2.65	2.81	2.90	2.97	3.09	3.05	3.04	3.04	3.00	2.84
1981	2.94	2.41	2.37	2.44	2.38	2.49	2.48	2.50	2.40	2.40	2.42	2.53	2.44
1982	2.39	2.16	2.20	2.17	1.98	2.06	2.19	2.16	2.00	2.09	2.22	2.36	2.22
1983	2.32	2.20	2.34	2.46	2.53	2.55	2.55	2.55	2.47	2.50	2.54	2.78	2.50
1984	2.61	2.54	2.26	2.25	2.29	2.25	2.19	2.24	2.21	2.18	2.16	2.23	2.26
1985	2.14	2.08	1.98	1.88	1.96	2.03	2.07	*2.07					
Item and year beginning May 1	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Average weighted by sales 1/
Dollars per ton													
Hay (mid-month)													
1980	69.30	65.10	67.00	67.20	71.90	77.20	75.00	74.80	72.80	72.50	69.80	68.20	71.00
1981	75.30	66.90	64.00	63.90	62.70	64.80	65.40	65.70	67.90	69.90	69.50	73.30	67.30
1982	77.50	69.60	66.10	65.00	66.80	67.10	68.70	68.60	70.30	73.20	69.90	74.00	69.30
1983	78.10	72.70	71.20	71.20	74.70	76.80	75.10	76.70	76.60	78.70	79.40	79.80	75.80
1984	82.50	76.10	72.40	70.40	70.70	73.10	71.40	73.40	73.00	73.10	72.20	72.80	72.70
1985	77.90	71.80	68.80	66.90	67.10	66.00	66.00	67.20	67.80				

1/ Includes an allowance for unredeemed loans and purchase agreement deliveries valued at the average loan rate, by States; excludes Government payments. *Preliminary.
Source: Agricultural Prices, Crop Reporting Board, USDA.

Table 12.--Cash prices at principal markets, 1980-86

Item and year beginning October 1	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Simple average
Dollars per bushel													
CORN No. 2 Yellow, St. Louis													
1980	3.35	3.53	3.59	3.60	3.47	3.42	3.49	3.42	3.33	3.34	3.03	2.61	3.35
1981	2.53	2.59	2.54	2.65	2.61	2.66	2.78	2.78	2.75	2.68	2.42	2.32	2.61
1982	2.12	2.43	2.49	2.52	2.79	2.99	3.24	3.24	3.27	3.39	3.68	3.60	2.98
1983	3.50	3.53	3.45	3.41	3.31	3.55	3.61	3.58	3.57	3.43	3.33	3.09	3.45
1984	2.84	2.77	2.75	2.86	2.84	2.86	2.88	2.81	2.79	2.72	2.47	2.38	2.75
1985	2.27	2.50	2.59	2.55									
CORN No. 2 Yellow, Omaha													
1980	3.16	3.34	3.30	3.29	3.18	3.17	3.24	3.24	3.19	3.15	2.79	2.51	3.13
1981	2.44	2.39	2.37	2.47	2.45	2.48	2.61	2.65	2.65	2.54	2.23	2.23	2.46
1982	2.12	2.35	2.37	2.42	2.62	2.82	3.09	3.10	3.11	3.18	3.39	3.32	2.82
1983	3.23	3.24	3.17	3.11	3.03	3.25	3.33	3.35	3.37	3.22	3.11	2.94	3.20
1984	2.71	2.61	2.55	2.60	2.61	2.68	2.73	2.68	2.70	2.61	2.39	2.35	2.60
1985	2.26	2.28	2.36	2.33									
SORGHUM No. 2 Yellow, Kansas City													
Dollars per cwt													
1980	5.65	5.91	5.82	5.79	5.52	5.46	5.49	5.38	5.23	5.29	4.58	4.16	5.36
1981	4.14	4.14	4.27	4.44	4.26	4.28	4.45	4.48	4.50	4.38	4.02	4.06	4.29
1982	3.85	4.25	4.37	4.37	4.54	5.08	5.30	5.37	5.37	5.32	5.69	5.55	4.92
1983	5.37	5.25	5.16	5.09	5.03	5.40	5.36	5.39	5.40	4.95	4.74	4.46	5.13
1984	4.25	4.28	4.32	4.48	4.33	4.58	4.76	4.74	4.74	4.50	4.06	3.56	4.38
1985	3.62	3.75	3.97	3.95									
Item and year beginning June 1	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Simple average
Dollars per bushel													
OATS No. 2 Heavy, Minneapolis													
1980	1.67	1.80	1.70	1.86	1.96	2.15	2.16	2.20	2.25	2.23	2.21	2.23	2.04
1981	2.18	2.02	1.99	2.02	2.09	2.28	2.10	2.23	2.26	2.16	2.21	2.16	2.14
1982	2.12	1.87	1.53	1.51	1.51	1.67	1.67	1.67	1.63	1.63	1.73	1.71	1.69
1983	1.67	1.60	1.79	1.94	2.00	1.97	1.94	1.98	1.82	1.88	1.89	1.96	1.87
1984	1.92	1.84	1.77	1.79	1.84	1.92	1.87	1.81	1.82	1.79	1.73	1.65	1.81
1985	1.59	1.44	1.23	1.24	1.19	1.32	1.39	1.37					
BARLEY No. 2 or Better Feed, Minneapolis													
1980	2.15	2.48	2.39	2.43	2.77	3.03	2.75	2.81	2.90	2.63	2.51	2.39	2.60
1981	2.09	2.26	2.35	2.21	2.26	2.31	2.06	2.20	2.27	2.16	2.16	2.24	2.21
1982	2.12	1.85	1.72	1.69	1.54	1.58	1.59	1.63	1.72	1.73	2.01	1.95	1.76
1983	1.96	1.95	2.42	2.61	2.60	2.53	2.39	2.55	2.56	2.65	2.74	2.77	2.48
1984	2.59	2.18	2.13	2.05	2.10	2.06	1.88	1.98	1.99	1.97	2.05	2.05	2.09
1985	1.90	1.66	1.46	1.40	1.41	1.49	1.60	1.57					
BARLEY No. 3 or Better Malting, 65% or Better Plump, Minneapolis													
1980	2.99	3.36	3.27	3.63	3.80	3.88	3.77	3.75	3.83	3.71	3.84	3.80	3.64
1981	3.34	2.95	3.15	3.05	3.02	3.07	2.92	3.00	3.14	2.99	2.98	3.05	3.06
1982	2.93	2.63	2.48	2.37	2.42	2.45	2.37	2.38	2.42	2.45	2.68	2.76	2.53
1983	2.60	2.54	2.76	2.90	2.96	2.95	2.77	2.85	2.76	2.91	3.04	3.06	2.84
1984	3.04	2.86	2.48	2.44	2.43	2.43	2.36	2.46	2.47	2.51	2.52	2.55	2.55
1985	2.46	2.25	2.03	2.15	2.10	2.27	2.29	2.28					

Source: Grain and Feed Market News, AMS, USDA.

Table 13.--Feed-price ratios for livestock, poultry, and milk, by months, 1980-86

Item and year beginning October 1	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
HOG/CORN, U.S. basis 1/													
1980	15.8	14.7	13.7	12.8	12.8	11.9	12.0	12.6	15.0	15.7	17.1	19.1	14.4
1981	18.4	17.7	16.3	17.1	19.8	19.8	20.1	21.8	22.4	23.1	26.6	28.5	21.0
1982	28.2	24.6	23.7	23.4	21.9	18.6	15.9	15.1	14.4	13.9	13.9	13.3	18.9
1983	12.8	11.8	14.0	15.4	14.6	14.3	14.3	14.1	14.5	15.8	16.2	16.0	14.5
1984	16.5	18.4	19.0	18.2	18.4	16.4	15.3	15.5	17.0	17.8	17.4	17.4	17.3
1985 2/	20.3	19.6	19.8	19.0									
BEEF-STEER/CORN, Omaha 3/													
1980	21.3	19.5	19.5	19.1	19.3	19.4	20.0	20.6	21.4	21.5	23.8	26.0	21.0
1981	25.2	25.0	25.0	24.6	25.9	26.5	26.5	27.2	26.5	26.1	29.2	27.5	26.3
1982	27.7	25.1	25.2	24.5	23.4	22.7	21.9	21.8	21.2	19.6	18.1	17.8	22.4
1983	18.4	18.3	19.8	21.6	22.1	21.1	20.4	19.7	19.1	20.4	20.7	21.3	20.3
1984	22.4	24.6	25.6	24.8	24.1	22.2	21.5	21.5	21.0	20.4	21.7	21.8	22.6
1985 2/	25.7	27.8	26.7	25.6									
MILK/FEED, U.S. basis 4/													
1980	1.43	1.40	1.39	1.39	1.39	1.41	1.39	1.35	1.36	1.40	1.43	1.48	1.40
1981	1.53	1.56	1.54	1.55	1.53	1.53	1.51	1.46	1.47	1.47	1.50	1.57	1.52
1982	1.61	1.62	1.60	1.59	1.56	1.55	1.49	1.45	1.43	1.45	1.41	1.36	1.51
1983	1.39	1.36	1.34	1.33	1.33	1.34	1.32	1.32	1.33	1.35	1.40	1.48	1.36
1984	1.56	1.62	1.59	1.58	1.57	1.57	1.51	1.49	1.44	1.44	1.47	1.51	1.53
1985 2/	1.56	1.55	1.53	1.49									
EGG/FEED, U.S. basis 5/													
1980	5.7	6.0	6.6	5.9	5.7	5.6	5.9	5.2	5.2	5.5	5.8	6.4	5.8
1981	6.5	7.2	6.7	6.6	6.8	7.1	6.6	5.6	5.3	5.7	5.4	6.0	6.3
1982	6.3	6.3	6.0	5.7	5.8	6.1	5.8	6.0	5.8	5.7	6.1	6.0	6.0
1983	6.2	6.9	7.7	8.8	8.5	7.4	8.6	6.5	5.8	5.8	5.8	5.9	7.0
1984	5.7	6.5	6.2	5.5	5.6	6.2	5.7	5.5	5.8	5.8	6.5	7.0	6.0
1985 2/	7.3	7.4	7.4	7.2									
BROILER/FEED, U.S. basis 6/													
1980	2.8	2.5	2.5	2.6	2.6	2.6	2.3	2.4	2.6	2.6	2.5	2.4	2.5
1981	2.4	2.4	2.3	2.6	2.6	2.6	2.5	2.6	2.7	2.6	2.5	2.6	2.5
1982	2.5	2.5	2.5	2.6	2.7	2.4	2.3	2.4	2.6	2.8	2.8	2.7	2.6
1983	2.5	2.8	2.9	3.1	3.1	3.1	2.7	2.7	2.7	3.0	2.7	2.8	2.8
1984	2.6	2.8	2.6	2.8	2.8	2.8	2.8	2.9	3.1	3.1	3.0	3.3	2.9
1985 2/	3.1	3.5	3.2	3.2									
TURKEY/FEED, U.S. basis 7/													
1980	4.0	3.9	3.5	3.1	3.1	3.2	3.0	3.0	3.3	3.3	3.2	3.1	3.3
1981	2.8	3.1	2.9	3.0	3.0	3.0	3.0	3.0	3.2	3.4	3.5	3.8	3.1
1982	3.9	3.9	3.0	2.9	2.9	2.9	2.7	2.9	3.0	2.8	2.8	3.0	3.0
1983	3.0	3.1	3.5	3.6	3.2	3.3	3.3	3.3	3.3	3.6	3.8	3.9	3.4
1984	4.4	5.0	5.5	4.8	3.9	3.7	3.8	3.7	3.9	4.2	4.6	5.0	4.4
1985 2/	5.5	5.5	5.6	3.4									

1/ Bushels of corn equal in value to 100 pounds of hog, live weight.

2/ Preliminary.

3/ Based on price of choice beef-steers, 900-1,100 pounds.

4/ Pounds of 16 percent mixed dairy feed equal in value to 1 pound whole milk.

5/ Pounds of laying feed equal in value to 1 dozen eggs.

6/ Pounds of broiler grower feed equal in value to 1 pound broiler, live weight.

7/ Pounds of turkey grower feed equal in value to 1 pound turkey, live weight.

Source: Agricultural Prices, Crop Reporting Board, USDA.

Table 14.—Price trends, selected feeds, and corn products

Item	Unit	Oct.-Sept. 1984/85 1/	1985					1986	
			July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
WHOLESALE, MOSTLY BULK 2/									
Soybean meal, 44% solvent, Decatur	\$/ton	125	114	121	131	138	143	145	153
Soybean meal, high protein, Decatur	"	136	123	129	138	146	152	154	162
Cottonseed meal, 41% solvent, Memphis	"	99	100	100	97	117	129	128	146
Linseed meal, 34% solvent, Minneapolis	"	88	76	80	82	92	104	115	124
Meat and bone meal, Kansas City	"	150	130	141	151	165	171	174	169
Fishmeal, 65% protein, East Coast	"	264	206	207	241	285	259	298	291
Corn Gluten feed, Illinois pts.	"	73	74	78	81	87	89	92	92
Corn Gluten meal, 60% protein, Illinois pts.	"	203	175	198	211	209	209	220	219
Brewers' dried grains, Milwaukee	"	64	61	51	71	75	71	93	106
Distillers' dried grain, Lawrenceburg, Ky.	"	94	89	95	96	100	105	111	115
Feather meal, Arkansas Pts.	"	133	123	114	129	160	153	151	153
Wheat bran, Kansas City	"	66	65	51	53	63	73	90	64
Wheat middlings, Kansas City	"	66	65	51	53	63	73	90	64
Rice bran, f.o.b. mills, Arkansas	"	58	54	42	42	40	49	68	85
Hominy feed, Illinois pts.	"	79	83	80	77	77	77	86	85
Alfalfa meal, dehy., Kansas City	"	99	87	86	86	89	93	95	98
Cane molasses, New Orleans	"	48	41	42	48	54	58	64	65
Molasses beet pulp, Los Angeles	"	117	106	106	104	107	112	117	119
Animal fat, Kansas City	c/lb.	15.5	11.7	10.9	10.6	11.0	11.0	10.9	11.8
Urea, 42% N., Fort Worth	\$/ton	222	220	220	220	220	220	220	220
Corn, No. 2 white, Kansas City	\$/bu.	3.27	2.90	2.67	2.47	2.40	2.45	2.50	2.50
PRICES PAID, U.S. BASIS 3/									
Soybean meal, 44%	\$/cwt.	10.68	9.74	9.76	10.00	10.30	10.60	10.70	10.90
Cottonseed meal, 41%	"	12.19	11.30	11.10	10.80	10.70	11.00	11.00	11.30
Wheat bran	"	9.67	9.48	9.44	9.35	9.24	9.31	9.29	9.43
Wheat middlings	"	9.04	8.80	8.65	8.53	8.45	8.42	8.53	8.67
Broiler grower feed	\$/ton	207	196	192	189	181	182	186	191
Laying feed	"	185	181	178	177	175	178	179	181
Turkey grower feed	"	216	210	211	209	207	212	213	209
Chick starter	"	206	197	194	191	187	191	191	190
Dairy feed, 16%	"	172	168	165	163	162	163	165	169
Beef cattle concentrate, 32-36% protein	\$/cwt.	10.74	10.30	10.20	10.10	10.10	10.50	10.60	10.70
Hog concentrate, 38-42% protein	"	12.46	11.70	11.70	12.10	12.40	12.70	12.80	13.00
Stock salt	"	6.44	6.47	6.48	6.48	6.45	6.48	6.48	6.45
CORN PRODUCTS, WHOLESALE 4/									
Corn meal, New York									
White	\$/cwt.	16.94	18.18	18.12	18.39	17.39	17.57	17.90	17.88
Yellow	"	13.01	13.18	12.72	12.81	12.34	12.57	12.83	12.63
Grits (brewers'), Chicago	"	10.24	10.19	10.07	10.24	9.35	9.54	9.84	9.65
Syrup, Chicago West	c/lb.	11.10	11.48	10.80	10.63	9.91	9.18	9.18	9.18
Sugar (dextrose), Chicago West	"	21.93	22.10	22.00	22.00	22.00	22.00	22.00	22.00
High-fructose (dried weight in tank cars), Chicago West	"	18.80	21.13	21.13	18.31	13.55	11.25	11.88	12.00
Corn starch, f.o.b. Midwest	\$/cwt.	11.24	10.60	10.52	10.32	10.02	10.02	9.10	9.22

1/ Preliminary. 2/ Grain and Feed Market News, AMS, USDA, except urea which is from Feedstuffs, Miller Publishing Co., Minneapolis, Minnesota. 3/ Agricultural Prices, SRS, USDA. 4/ Milling and Baking News, Kansas City, Missouri, except starch which is from industry sources.

Table 15.—Hay (all); acreage, supply, and disappearance, 1980-85

Item	Unit	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86 1/
Acreage harvested	Mil. acres	58.9	59.6	59.8	59.7	61.4	60.6
Yield per acre	Tons	2.22	2.39	2.50	2.36	2.45	2.46
Carryover (May 1)	Mil. short tons	33.2	25.4	25.0	28.1	20.1	26.9
Production	"	130.7	142.5	149.2	140.8	150.6	149.0
Supply	"	163.9	167.9	174.2	168.9	170.7	175.9
Disappearance	"	138.5	142.9	146.1	148.8	143.8	N.A.
Roughage-consuming animal units (RCAU)	Mil. units	89.9	91.8	90.2	89.3	85.9	84.1
Supply per RCAU	Tons	1.82	1.83	1.93	1.89	1.99	2.09
Disappearance per RCAU	"	1.54	1.56	1.62	1.67	1.67	N.A.

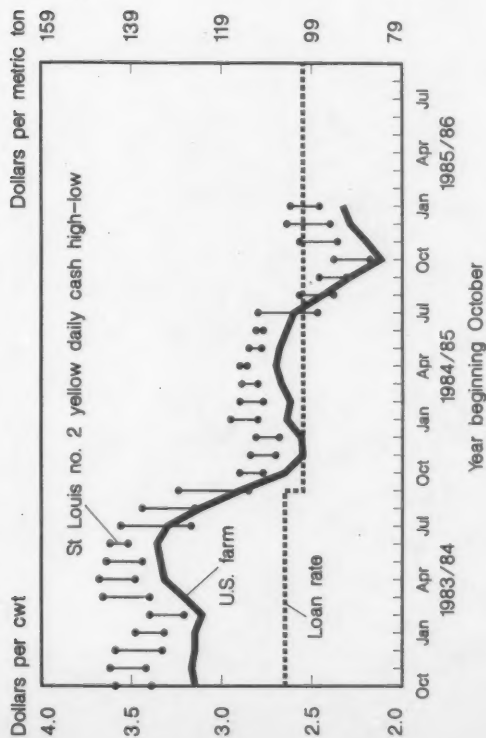
1/ February 1986 crop indications. N.A.=Not available.

Table 16.—Annual hay production, pasture-range index (October 1), and prices received by farmers, 1980-85

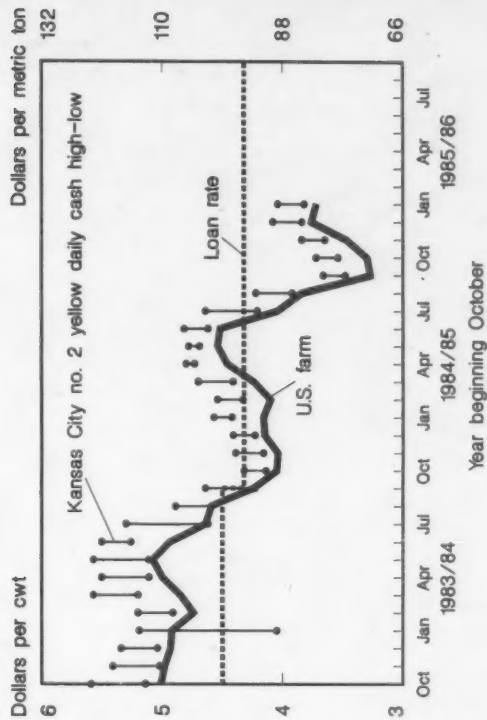
Year	North-east	Lake States	Corn Belt	Northern Plains	Appalachian	South-east	Delta States	Southern Plains	Mountain	Pacific	United States 1/
Thousand tons											
<u>1980</u>											
Hay production	12,672	23,378	21,861	18,882	7,929	2,806	2,828	7,830	19,234	13,320	130,740
Pasture-range index	64	88	77	55	48	54	40	43	76	89	63
<u>1981</u>											
Hay production	12,682	23,025	24,118	23,023	8,490	3,139	3,750	10,470	20,527	13,296	142,520
Pasture-range index	83	86	86	77	82	67	76	82	78	80	80
<u>1982</u>											
Hay production	13,150	25,364	23,674	26,391	8,845	3,631	3,950	10,224	20,767	13,245	149,241
Pasture-range index	77	85	86	85	82	79	80	62	92	83	81
<u>1983</u>											
Hay production	12,901	24,986	19,229	24,625	7,644	3,116	3,524	11,202	20,429	13,108	140,764
Pasture-range index	67	79	47	69	48	67	62	58	86	93	67
<u>1984</u>											
Hay production	13,539	26,495	24,207	26,145	9,701	3,905	3,667	8,971	20,131	13,887	150,648
Pasture-range index	77	75	69	64	69	62	70	43	86	84	70
<u>1985</u>											
Hay production	13,685	24,828	24,803	22,352	10,876	3,894	3,860	12,965	18,121	13,575	148,959
Pasture-range index	81	87	78	75	76	75	78	74	70	71	76
Mid-October prices	Penn-sylvania	Wisconsin	Iowa	Kansas	Kentucky	Arkansas	Texas	Colorado	California	United States	
Dollars per ton											
1980	66.00	40.00	56.00	66.00	59.50	52.50	74.00	63.00	99.00	77.20	
1981	93.00	62.00	52.00	57.00	62.00	44.00	58.00	65.00	70.00	64.80	
1982	81.00	63.00	51.00	56.00	66.00	50.00	69.00	61.00	82.00	67.10	
1983	93.00	69.00	72.00	77.00	87.00	69.00	77.00	69.00	88.00	76.80	
1984	93.00	59.00	57.00	73.00	78.00	61.00	97.00	72.00	81.00	73.10	
1985	64.00	59.00	46.00	52.00	67.00	53.00	67.00	65.00	79.00	66.00	

1/ U.S. price weighted by regional production.

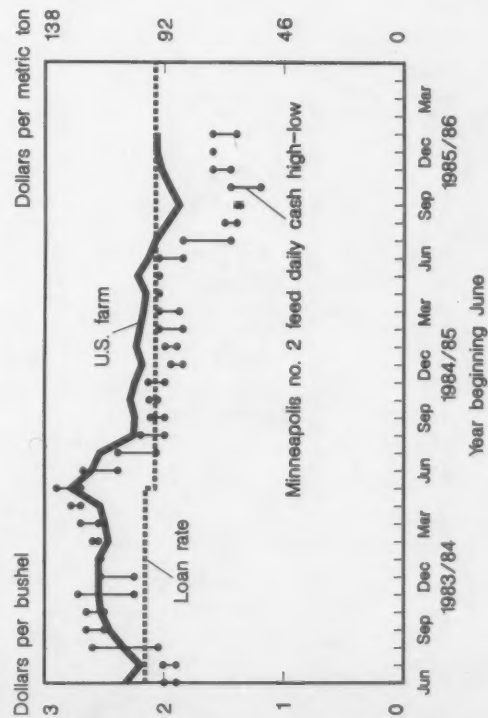
Corn Prices



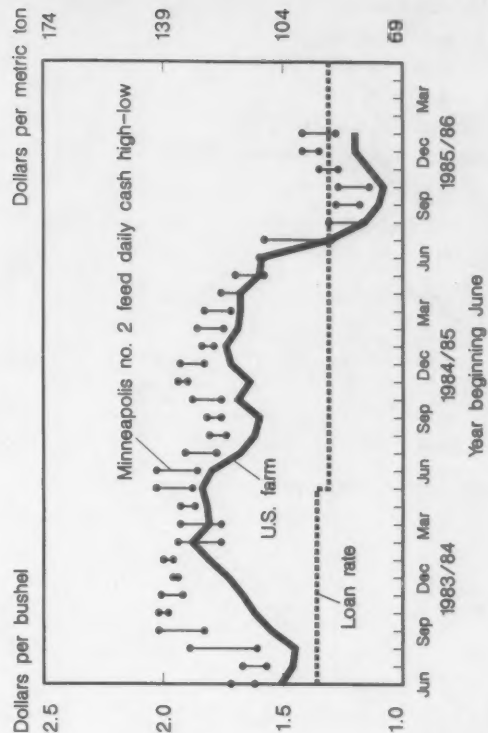
Sorghum Prices



Barley Prices



Oat Prices



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